Clallam Transit System

Comprehensive Operations Analysis
FINAL REPORT

August 10, 2021

WALKER CONSULTANTS

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1. Executive Summary

1. Executive Summary

Study Overview

The Clallam Transit System (CTS) started this Comprehensive Operations Analysis (COA) in November of 2020. The primary purpose of the COA is to conduct a comprehensive review of CTS fixed-route service operations to assess its current ridership performance, adequacy in meeting the transit needs of the community, and cost-efficiency in the delivery of service.

The study included extensive data collection, market analysis and community engagement activities, and detail reviews of service operations and financial conditions to produce an existing conditions assessment for each route in the system and recommendations for service change and improvement to increase ridership performance, adequacy to market trends, and financial efficiency.

Key Findings

Service Analysis

CTS fixed-route services are classified into urban, rural and intercity tiers in response to different service functions, mobility needs and operating environments. Routes vary considerably in length depending on whether they are urban, rural or intercity services, with urban routes operating short routes of less than 5 miles in length (one-way), and intercity routes operating long routes of up to 75 miles in length.

CTS operates 16 vehicles during peak times, when all routes are in service, on weekdays. Route cycle times and frequencies also vary considerably by service tier, with urban routes operating at frequencies of 30 to 60 minutes, intercity routes operating at frequencies of 30 to 120 minutes, and rural routes operating limited numbers of trips that result in frequencies of about 2 to 4 hours.

Vehicles are scheduled to operate in different routes throughout the day, or shared between routes, to make efficient use of resources, and because limited trips on rural routes do not support dedication of a full vehicle for each route. This strategy results in a complex interlining of route schedules but efficient blocking and runcutting of service vehicles and driver assignments.

The current CTS fixed-route schedules have an average recovery and layover time ratio of 25%, which is at least 5-10 percent points higher than recommended by best practice (15-20%). This is a significant finding. Increasing the schedule efficiency of Clallam Transit's fixed-route services alone can increase service by 5%.

System Performance

Recent trends show that system ridership fell from a high of about 800,000 boardings in year 2014 to a low of about 700,000 boardings in year 2017. But ridership had been growing since, recording over 720,000 boardings in year 2019, before the COVID-19 pandemic.

In contrast, vehicle revenue hours had been increasing through the six-year period, from about 43,000 revenue hours in year 2014 to about 50,000 revenue hours in year 2019. A sharp increase in vehicle revenue hours in years 2016, 2017 and 2018 was able to not only reverse the trend in annual boardings losses, but also generate new ridership for the system.

However, a significant increase in vehicle revenue hours and overall reduction in annual boardings resulted in reduced productivity for the system, falling from an average of 18.4 boardings per revenue hour in year 2014, to an average of 14.4 boardings per revenue hour in year 2019.

For the purpose of analyzing the system's performance, routes were categorized into four groups – urban routes, community circulators, rural routes and intercity routes:

- Urban Routes – #20, 22, 24, 26
- Community Circulators – #17, 40
- Rural Routes – #10, 15, 16, 50, 52
- Intercity Routes – #14, 30, 123

The urban routes in Port Angeles comprise 50 percent of the system's ridership, followed by the intercity routes which capture 40 percent of weekday ridership. One-half of the system routes (all rural routes and community circulator routes) capture 10 percent of ridership only, a very low number of boardings.

Operating costs and service hours are highly related. About 50 percent of costs are spent on intercity routes, while urban routes receive 25 percent of operating costs. The remaining 25 percent is spent on rural and community circulator routes.

Financial Analysis

The system's fare recovery – in year 2019, pre COVID-19, was 11.7% across the board. As a way of comparison, the State of California, through its Transportation Development Act (TDA) funding system, requires urban transit systems to recover at least 20 percent of costs at the farebox, and rural transit systems to recover at least 10 percent of costs.

Clallam Transit is a mixed system that operates routes in urban areas and rural areas, therefore a more appropriate comparison would be to look at the performance of routes by type of service – urban, intercity, and rural. The average farebox recovery for urban, intercity and rural routes was 17%, 14% and 3% respectively.

The length of the route dictates the cost of operating the service. If fares are not set correctly, the revenue that is collected for each passenger and passenger mile may not reflect the real value of operating the service.

Current fares generate significantly higher revenue per passenger mile on urban routes than rural and intercity routes. Fares on rural and intercity routes are proportionally lower than the rest of the system. Urban riders are subsidizing riders of rural and intercity routes.

CTS has amassed a budget reserve of $13.2 million for Fiscal Year (FY) 2021, in part due to additional federal pandemic relief funding. This amounts to approximately 14 months of operating expenditures. CTS is projected to build a reserve of $17.2 million for FY 2022.

Despite needing to cover net losses in future years, under a status quo projection with no additional revenues, some reserve funds could be used for a modest expansion of service in the next 5-10 years.

If CTS were to invest $1 million per year, it would be able to operate and additional 8,700 vehicle hours and increase the fixed-route service by 17 percent. ADA paratransit service would increase 11 percent and about 3,200 additional vehicle hours.

Market Analysis

The most recent American Community Survey Five-Year Estimate 2015-2019 shows the population of Clallam County was 75,392 people. The population of the cities of Port Angeles, Sequim and Forks were estimated at 30,908, which amounts to 40 percent of the total population in the county. This means that 60 percent of the population lives outside of the cities' administrative boundaries in smaller communities and rural areas.

The median household income (MHI) of Clallam County households was estimated at $52,192. The MHI for the cities of Port Angeles, Sequim and Forks is lower than the county's average, which suggests that many residents living outside the cities' boundaries are more affluent.

Sequim had the lowest average household size, reflecting its large presence of seniors and retired residents, while Forks had the highest average, reflecting a larger presence of families. These figures are confirmed by the median age of the population, Forks had a median age of 32.3 years, and Sequim had a median age of 56.5 years.

Among the cities, Forks had the highest poverty rate at 28 percent, while Sequim had the lowest poverty rate at 13.6 percent. The employment rate (or percentage of the population within the labor force) was highest in Forks at 64.2 percent, while Sequim had the lowest percentage at 40.9 percent. Port Angeles is in the middle, perhaps due to a combination of families, seniors, and college students.

In general, population densities that support urban transit operations are at least 6,000 residents per sq. mile. The highest population density areas in the county are found in Port Angeles and Sequim with over 2,400 persons per sq. mile. Residential areas outside of Port Angeles and Sequim such as East Port Angeles, Carlsborg, and developments south of Highway 101, toward the mountains, include large numbers of residents in low density areas of 300 – 1,200 residents per sq. mile.

Clallam County jobs are largely concentrated in Port Angeles, Sequim, and places in between along the Highway 101 corridor. Other pockets of jobs are found in Forks and Clallam Bay. The location of jobs, workers homes and commute patterns show that there are many work trips that cross county boundaries, in both directions, for those coming to work in Clallam County and those going to work outside the county.

There are also many intra-county trips between the county's major urban centers, and especially between the Port Angeles urban area and Sequim urban area, and in a secondary category between the Port Angeles urban area and Forks, and other smaller communities such as Joyce and Clallam Bay. Both patterns, cross-county and intra-county trips, show the need for long distance transit connections and the role and importance of the Clallam Transit System in providing service across the county and between its urban centers and communities.

Many residents of the county are currently not in the labor force and use transit for non-work purposes (such as shopping, social recreation, personal business, and medical needs), and those that are in the labor force are not necessarily making trips at traditional commute times (from 8:00 a.m. to 5:00 p.m.).

Community Engagement

The main activities conducted during the community engagement phase were a community wide survey, a project advisory committee and discussions with stakeholders. Key findings of the survey include:

- Access to Vehicles: Most survey respondents have a drivers' license (84%), however only two-thirds (66%) have access to their own vehicle or share a vehicle (11%).
- Destination and Purpose of Travel: Port Angeles and Sequim are the main destinations for all trips, and especially for those that are related to work, school, grocery shopping, healthcare and shelter.
- Non-Riders and Former Riders: those that have not used any CTS service stated that the service lacked geographic coverage and time of day coverage. Those that stopped riding stated that the service was not frequent enough, did not go where they needed to go, and that the trip would take too long.
- Current Riders: three-quarters of users (75%) have been riding CTS for more than a year, with over one-third of them (36%) riding for more than five years. Most users indicated that they ride CTS services less than once a week, with about one in five (20%) saying that ride the service very rarely or infrequently.
- Service Accessibility: Many users walk long distances and appear to be riding long distances to access the nearest bus stop, with over one in four users (28%) riding a bicycle, getting a ride, or driving their own vehicle and parking.
- Service Availability: most riders (85%) have other options to travel if CTS was not available. More than one-half of users will drive their own vehicle or get a ride from someone else. About one-quarter of users would walk or ride a bike. This shows that most users have chosen to use CTS but have other options.
- Satisfaction with Service: Most users declared high levels of satisfaction with the service overall, but a lower level of satisfaction with the hours and frequency of service.
- Token Transit and Unite GPS: only about one-quarter of survey respondents (27%) use the Token Transit mobile payment and ticketing application, or the Unite GPS trip planning and real-time arrival information. More work is needed promoting and educating the public about these tools.
- Age and Gender: over one-half of respondents were female (54%), and about three-quarters of respondents were adults 25 – 64 years of age (73%)
- Employment: most respondents (57%) were employed full-time (40%) or self-employed or employed part-time (17%). Over one in five are retired (22%), and only 6 percent declared to be unemployed.
- Income: About one-third of respondents (30%) declared an annual household income below $30,000, which approximates the poverty threshold for a family of four. About 60% of respondents reported an income of $60,000 or less and are low income or poor.

Project Advisory Committee members, drivers and city and county planners also provided input on needs and priorities for service. PAC members thought that under financial constrains the most important priorities for the CTS service were to improve existing headways, provide better connections to travel across the region, and provide later evening service.

CTS drivers like their job and their work assignments. They were mostly concerned with the homeless situation in Port Angeles during COVID-19, which has been difficult to handle for riders, drivers, and supervisors.

Recommendations

The market analysis, community survey and stakeholders' feedback suggest that mobility needs and demands for additional transit service are much greater than the funding that CTS has currently available for investment in new service. However, CTS can pursue four strategic actions to address unmet needs and demands:

1. CTS can make strategic changes in the design of its service by making sure routes are reaching major travel destinations and following consistent alignment patterns, to help build frequency and span of service along major travel corridors.
2. CTS can make strategic changes in the design of its service by making sure routes are connecting efficiently at key decision points to travel across urban areas and across the region.
3. CTS can increase the efficiency of its service by making sure its vehicles are not idling for more than 20 percent of time.
4. CTS can make strategic investments in additional service, in the form of additional frequency of service and/or extended hours of service, to increase the convenience and reliability of service.

Network Design Goals

The first two strategies can be accomplished by making changes to the design of routes, including alignment, start and end points, service frequency and hours of service. Based on the existing conditions and route-by-route performance analysis, this plan establishes the following design goals for the CTS network:

- Provide better connections between inter-city routes to allow for cross-county trips.
- Provide cross-town services in Port Angeles and Sequim to reach destinations more effectively.
- Provide better frequency of service on major corridors, such as:
    - Front Street / 1st Street and Hwy 101 in Port Angeles and East Port Angeles
    - 8th Street and Lincoln Street in Port Angeles
    - Hwy 101 / Olympic Hwy in West Port Angeles
- Adjust route alignments to provide simpler and direct routes that allow for convenient and consistent travel in both directions, for instance reducing loops and off-route deviations.
- Provide continuous service schedules, add missing trips and fill in schedule gaps.
- Provide regular (clockface) service headways on rural and intercity routes to facilitate trip planning
- Provided extended service hours in the evening, on all routes if possible.
- Replace complicated shuttle loops, in low density and low demand areas such as Forks and Sequim, with on-demand shared-ride services (microtransit service).
- Increase service hours on Saturday to match weekday service, and
- Provide service on Sunday.

Crosstown Services

Although Routes 20, 22, 24 and 26 in Port Angeles are the best performing routes in the system in terms of passengers per hour, fare recovery ratio and cost per passenger, they are also the routes with the greatest potential to grow new ridership.

As many as 50 percent of their boardings are passengers transferring at the Gateway Transit Center between Port Angeles routes to access Safeway, the Civic Center, and other destinations along Lincoln St.

Service recommendations for Routes 20, 22, 24 and 26 include changes to the design of routes to operate as single alignments where riders can travel in both directions and reach all destinations along the route efficiently. Service change recommendations also call for interlining them in two crosstown routes.

Crosstown Route 1 is a combination of Routes 22 and 24, and Crosstown Route 2 is a combination of Routes 20 and 26. Both crosstown routes would provide a direct connection from the west side to the east side of Port Angeles, traveling along Lincoln Street and the Gateway Transit Center.

Service Scenarios

The comprehensive operational analysis provides a short-term five-year plan for service that is constrained by the current financial situation. The financial analysis in Chapter 2 shows that CTS can make a modest investment of up to $1 million (or 17% increase) in additional service in the next five years.

This plan proposes three service scenarios – conservative, moderate, and aggressive, to provide a phased and prioritized implementation of service changes. Each service scenario represents an incremental investment of 5 percent in additional service, from current levels of service.

Additional Service Funding

CTS can pursue four funding strategies to pay for increases in service, as recommended in the service scenarios and beyond, these strategies include:

1. Funding Reserves: Investing up to $1,000,000 of projected reserves into additional service, per year. This has been included in the service scenarios recommended by this plan.
2. Service Scheduling Efficiencies: Reducing vehicle idle time from 25 to 20 percent of all total vehicle hours would recoup up to 5 percent in operating costs that can be re-invested for no additional cost. This plan recommends a detail revision of all route schedules, vehicle blocks and drivers' assignments in order to increase efficiencies.
3. Revisions to Fare Structure: The current fare structure of rural and intercity routes is collecting much less per passenger mile than urban routes. Urban routes are subsidizing the rest of the system. Increasing the average revenue per passenger mile from $0.14 to $0.20 across all routes would generate up to a 5 percent increase in farebox revenue for the system. This is a strategy for further consideration.
4. Increasing Sales Tax Collection: Clallam Transit has authority to collect 0.9 percent of sales tax. It currently collects 0.6 percent only. Each 0.1 percent equals about $1.4 million. So, an additional 0.3 percent could provide the system with about $4 million per year. This requires further study.

An important benefit of setting an appropriate fare structure is that it also sets the framework for the paratransit service fares. Clallam Transit already provides reduced fares to seniors, persons with disabilities, college students and youth. It should consider implementation of a low-income fare program in conjunction with a change in its fare structure, to make sure service is fair and affordable for everyone in the county.

2. Existing Conditions

2. Existing Conditions

Introduction

The Clallam County Public Transportation Benefit Area (PTBA), with the trade name Clallam Transit System (CTS), was formed on July 24, 1979. Following the formation of the PTBA, the voters of Clallam County approved the collection of a sales tax not to exceed 0.3 percent (0.3%) of one cent ($0.01) to fund the public transportation services provided by CTS.

In 2000, after the elimination of the state motor vehicle excise tax (MVET), voters approved an additional 0.3 percent (0.3%) of one cent ($0.01) to replace the lost revenue from the MVET and establish needed revenue to continue the public transportation services provided by CTS. In 2011, Clallam Transit assumed operations of paratransit services.

CTS currently provides service to 14 "fixed" bus routes and complimentary ADA paratransit services, with a fleet of approximately 100 vehicles and 100 employees, serving over 74,000 county residents throughout the 1,738 square miles of Clallam County. Clallam Transit maintains over 60 bus shelters, 5 park-and-ride lots, and 3 transfer centers. In 2017, CTS expanded its regional service to the Bainbridge Island Ferry Terminal which saw strong ridership growth until the COVID-19 pandemic.

Fixed-Route Service

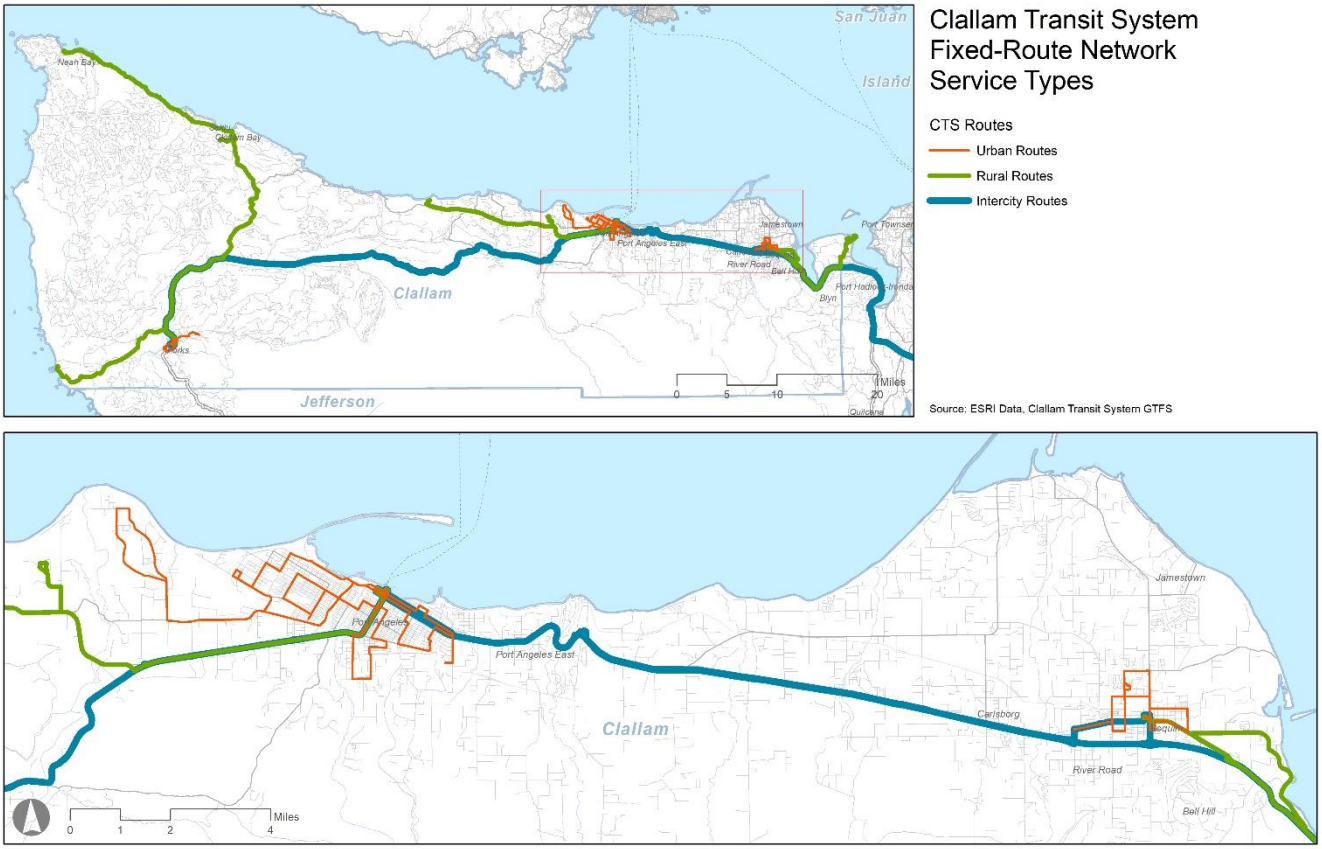
Clallam Transit Fixed-Route Network

CTS organizes its fixed-route network into three service tiers – urban, rural and intercity:

- Urban routes include all local routes operating in Port Angeles, Sequim and Forks. These include Routes 17 – Forks Shuttle, 20 – College/Medical Center, 22 – Lincoln/Peabody, 24 – Cherry Hill, 26 – West Side and 40 – Sequim Shuttle.
- Rural routes include all routes providing connections to outlying communities that interact with the major urban centers in Forks, Port Angeles and Sequim. These include Routes 10 – Joyce/Lyre River, 15 – La Push, 16 – Neah Bay/Clallam Bay, 50 – Jamestown Campus, and 52 – Diamond Point.
- Intercity routes include all routes providing direct connections between urban centers. These include Routes 14 – Forks, 30 – Hwy 101 Commuter, and 123 – The Strait Shot (connecting Port Angeles and Sequim with Poulsbo and the Bainbridge Island Ferry Terminal).

Figure 1 below shows the extent of the fixed-route network that is operated by CTS every weekday. Intercity routes provide connections across the entire county (80 miles), rural routes connect outlying communities with urban centers, and urban routes provide circulation throughout those centers.

Figure 1: Clallam Transit Fixed-Route Network



Source: Walker Consultants 2021

Transit Centers

The network of urban, rural and intercity routes is designed to connect and provide riders with opportunities to transfer between service routes at three transit centers in Port Angeles, Sequim and Forks.

- The Gateway Transit Center, in Port Angeles, connects all urban routes in Port Angeles (#20, 22, 24 and 26), all intercity routes, to Forks, Sequim and Bainbridge Island (#14, 30 and 123), and Route 10 to Joyce and Lyre River.
- The Sequim Transit Center, in Sequim, connects the Hwy 101 Commuter route (#30) with the local Sequim Shuttle (#40) and the rural routes to Jamestown Campus and Diamond Point (#50 and 52).
- The Forks Transit Center, in Forks, connects the Forks route (#14) with the local Forks Shuttle (#17), the rural routes to La Push, Neah Bay and Clallam Bay (#15 and 16).

CTS connects with Jefferson Transit Authority (JTA) at the Sequim Transit Center for service to eastern Jefferson County and at the Forks Transportation Center & Rest Stop for service to western Jefferson County.

CTS also coordinates service with tribal nation transportation planners to have connections with Makah Transit in Neah Bay, Quileute Community Shuttle (Forks and La Push), Lower Elwha Transit in Port Angeles, and with Jamestown S'Klallam for contracted service to Blyn and the Jamestown Campus.

Other Facilities

In addition to transit centers, the CTS fixed-route system also provides seven park & rides opportunities for riders to access service from residential locations that are not currently served by the fixed-route network or are not accessible by a regular walk (either too far away or do not have a safe and convenient access to bus stops). These are located at:

- Forks Transit Center & Rest Stop
- Sappho (US Hwy 101 & SR 113)
- SR 112 & Peters Road (WSDOT)
- Laird's Corner (US Hwy 101 & Laird Road)
- Deer Park Rest Stop (Clallam County)
- Sequim Transit Center Park & Ride Lot
- Gateway Transit Center parking garage (paid parking)

Lastly, CTS has its administration offices, bus depot and main maintenance facility located in Port Angeles, and leases space for bus parking and light maintenance function in Forks.

Service Days and Span of Service

CTS operates 14 fixed-route services every weekday from roughly 5:00 a.m. to 10:00 p.m. Table 1 below provides a detail breakdown of hours of service and availability for each route in the system on weekdays.

Table 1: CTS Service Availability on Weekday

Route	Name	5-6 AM	6-7 AM	7-8 AM	8-9 AM	9 AM 4 PM	4-5 PM	5-6 PM	6-7 PM	7-8 PM	8-10 PM
10	Joyce		✓	✓	✓	✓	✓	✓	✓	✓	
14	Forks		✓	✓	✓	✓	✓	✓	✓		
15	La Push			✓	✓	✓					
16	Neah Bay			✓	✓	✓	✓	✓	✓		
17	Forks Shuttle			✓	✓	✓	✓				
20	College/Medical Center			✓	✓	✓	✓	✓	✓		
22	Lincoln/Peabody			✓	✓	✓	✓	✓	✓		
24	Cherry Hill	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
26	Westside			✓	✓	✓	✓	✓	✓	✓	
30	Hwy 101 Commuter		✓	✓	✓	✓	✓	✓	✓	✓	✓
40	Sequim Shuttle					✓					
50	Jamestown				✓	✓	✓				
52	Diamond Point			✓	✓	✓	✓	✓			
123	Strait Shot			✓	✓	✓	✓	✓	✓	✓	✓

Source: Walker Consultants 2021

CTS operates 11 fixed-routes services every Saturday from roughly 7:00 a.m. to 9:00 p.m. Table 2 below provides a detail breakdown of hours of service and availability for each route in the system on Saturday.

Table 2: CTS Service Availability on Saturday

Route	Name	5-6 AM	6-7 AM	7-8 AM	8-9 AM	9 AM 4 PM	4-5 PM	5-6 PM	6-7 PM	7-8 PM	8-10 PM
10	Joyce					✓	✓	✓	✓	✓	
14	Forks			✓	✓	✓	✓	✓	✓		
15	La Push					✓	✓	✓			
16	Neah Bay				✓	✓	✓	✓	✓	✓	
17	Forks Shuttle					✓	✓				
20	College/Medical Center				✓	✓	✓	✓			
22	Lincoln/Peabody				✓	✓	✓	✓	✓		
24	Cherry Hill			✓	✓	✓	✓	✓	✓	✓	✓
26	Westside				✓	✓	✓	✓	✓		
30	Hwy 101 Commuter			✓	✓	✓	✓	✓	✓	✓	
40	Sequim Shuttle										
50	Jamestown										
52	Diamond Point										
123	Strait Shot			✓	✓	✓	✓	✓	✓	✓	

Source: Walker Consultants 2021

CTS also operates its Route 123 – The Strait Shot service on Sundays, currently providing one round trip to the Bainbridge Island Ferry Terminal in the afternoon, between roughly 4:00 and 8:30 p.m. each Sunday.

Service Hours and Miles

CTS fixed-route services are classified into urban, rural and intercity tiers in response to different service functions, mobility needs and operating environments. Routes vary considerably in length depending on whether they are urban, rural or intercity services, with urban routes operating short routes of less than 5 miles in length (one-way), and intercity routes operating long routes of up to 75 miles in length.

The number of service trips or one-way trips that can be provided with one vehicle each day, determines the level of service and amount of vehicle revenue hours and vehicle revenue miles that are provided in each route. Table 3 below provides a summary of the level of service that is operated in each route, along with the length of the route and each round trip.

Table 3: Fixed-Route Design and Service Parameters (Weekdays)

Route #	Route Name	Roundtrip Length	One-Way Length	Revenue Hours	Revenue Miles	One-Way Trips
10	Joyce	47.4	23.7	8.5	284.6	12.0
14	Forks	115.2	57.6	29.0	921.7	16.0
15	La Push	32.5	16.2	3.4	97.4	6.0
16	Neah Bay	106.2	53.1	13.8	424.8	8.0
17	Forks Shuttle	13.2	6.6	7.3	105.9	16.0
20	College/Medical Center	6.4	3.2	12.5	141.1	50.0
22	Lincoln/Peabody	4.8	2.4	10.8	116.2	48.0
24	Cherry Hill	6.0	3.0	12.6	165.3	56.0
26	Westside	19.5	9.8	13.8	265.2	40.0
30	Hwy 101 Commuter	33.0	16.5	42.0	890.7	54.0
40	Sequim Shuttle	9.3	4.7	7.1	83.9	18.0
50	Jamestown	14.3	7.1	2.5	57.0	8.0
52	Diamond Point	28.5	14.2	3.7	85.4	6.0
123	The Strait Shot	145.2	72.6	10.2	290.4	4.0
	Daily Total			**177.2**	**3,929.6**	**342.0**

Source: Walker Consultants 2021

Service Frequency and Peak Vehicles

CTS operates 15 vehicles during peak times, when all routes are in service, on weekdays. Route cycle times and frequencies also vary considerably by service tier, with urban routes operating at frequencies of 30 to 60 minutes, intercity routes operating at frequencies of 30 to 120 minutes, and rural routes operating limited numbers of trips that result in frequencies of about 2 to 4 hours. Table 4 below provides a summary of cycle times, one-way running times, frequencies and vehicles for each route in the system.

Blocking and Runcutting

Vehicles are scheduled to operate in different routes throughout the day, or shared between routes, as a way to make efficient use of resources, and also because limited trips on rural routes do not support dedication of a full vehicle for each route. This strategy results in a complex interlining but efficient blocking and runcutting of service vehicles and driver assignments.

There are 26 driver work assignments operating 15 vehicles each weekday, 17 driver work assignments operating 10 vehicles on Saturday and 1 driver work assignment operating 1 vehicle on Sunday.

Table 4: Service Frequency and Vehicle Resources

Route #	Route Name	Cycle Time (hours)	One-Way Runtime	Frequency	Peak Vehicles
10	Joyce	1.50	25,33,39	120-180	1.00
14	Forks	3.50	80,85	110-120	2.00
15	La Push	1.10	25	240	0.25
16	Neah Bay	3.00	75,85	190-250	1.00
17	Forks Shuttle	1.00	43	60-120	0.75
20	College/Medical Center	0.50	20,25	30	2.00
22	Lincoln/Peabody	0.50	20	30	1.00
24	Cherry Hill	0.50	19	30	1.00
26	Westside	0.75	25,44	30-60	1.00
30	Hwy 101 Commuter	1.50	35	30	3.00
40	Sequim Shuttle	0.75	35	45-90	0.50
50	Jamestown	0.75	15	120-240	0.25
52	Diamond Point	1.10	27	300-330	0.25
123	The Strait Shot	5.00	115	600	1.00
	Daily Total				**15.00**

Source: Walker Consultants 2021

Scheduling Efficiency

Cycle time is the amount of time it takes for a bus to complete a round trip on a route and begin the next trip. This includes the running time of each one-way trip as well as the schedule recovery time and layover time. Schedule recovery time is time added to the schedule to manage variations due to congestion and operating conditions throughout the day. Layover time is time added to the schedule to provide drivers with a break. Longer routes have longer running times, recovery times and layover times. Longer cycle times reduce the frequency of service that can be provided with one vehicle.

The amount of recovery and layover time that is added to the running time to form a cycle can reduce the efficiency of the schedule. Vehicles are idling and not running during recovery and layover times; therefore, the more time vehicles can be kept running the more efficient the schedule will be. In general, a schedule efficiency of 80-85% represents a good use of vehicles and efficient scheduling. That is a 15-20% of recovery and layover time. The current CTS fixed-route schedules have an average recovery and layover time ratio of 25%, which is at least 5-10 percent points higher than recommended by best practice.

This is a significant finding. Increasing the schedule efficiency of Clallam Transit's fixed-route services alone can increase service by 5%.

Service Performance Analysis

Ridership Trends

Figure 2 below illustrates the six-year trend in annual boardings (unlinked trips) for the Clallam Transit fixed-route system against the amount of vehicle revenue hours that were provided each year. Ridership fell from a high of about 800,000 boardings in year 2014 to a low of about 700,000 boardings in year 2017. Ridership had been growing since, recording over 720,000 boardings in year 2019.

In contrast, vehicle revenue hours had been increasing through the six-year period, from about 43,000 revenue hours in year 2014 to about 50,000 revenue hours in year 2019. The sharp increase in vehicle revenue hours in years 2016, 2017 and 2018 has been able to not only reverse the trend in annual boardings losses, but also generate new ridership for the system.

However, the significant increase in vehicle revenue hours and overall reduction in annual boardings has resulted in reduced productivity for the system, falling from an average of 18.4 boardings per revenue hour in year 2014, to an average of 14.4 boardings per revenue hour in year 2019.

Figure 3 shows total boardings per fixed-route service, on a month-by-month basis, for year 2019. The chart shows that the highest ridership occurs on the Intercity Route 30 – Hwy 101 Commuter, connecting the Gateway Transit Center in Port Angeles with the Sequim Transit Center in Sequim. It is followed by the Port Angeles urban routes 20, 22, 24 and 26, and the Intercity Route 14 – Forks, connecting the Port Angeles Gateway Transit Center with the Forks Transit Center.

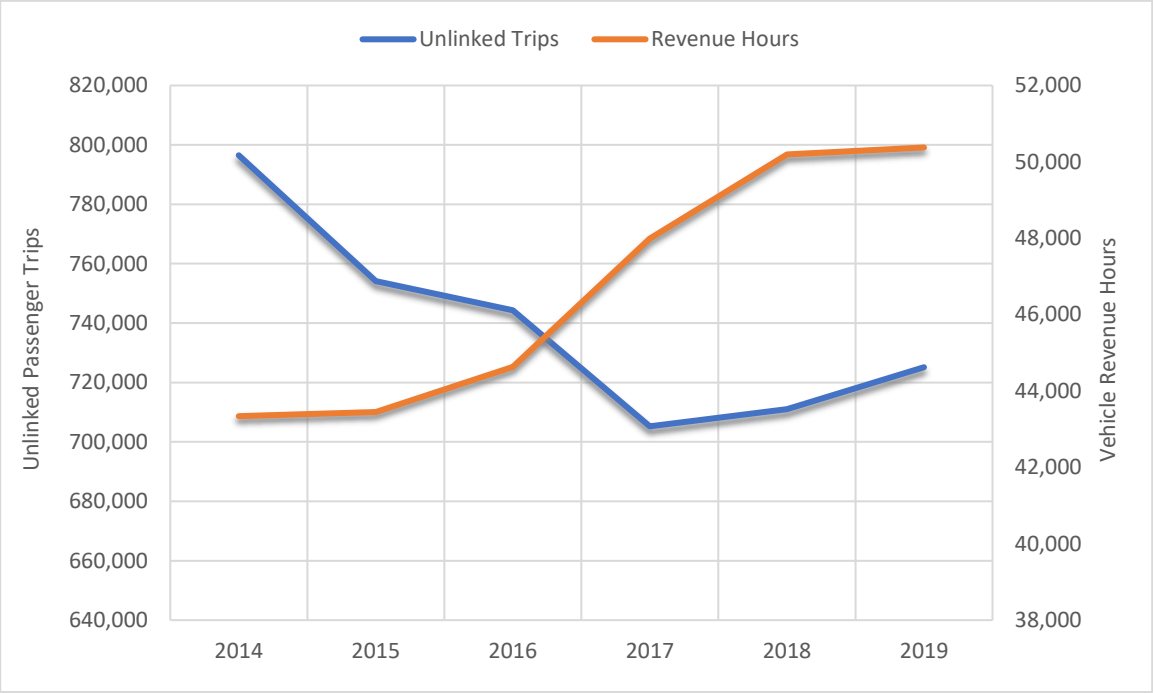
All other routes, including all rural routes and local shuttles had low ridership and a consistently low level of ridership throughout the year. Route 30 and the Port Angeles urban routes show a degree of variation in ridership throughout the year, with higher ridership in the spring months (March, April and May), in summer months (July and August), and in October. This pattern suggests higher ridership during college and high school academic years, but also in summer at the peak of the tourist season.

Figure 3 also shows that February 2019 was the lowest ridership month. This study conducted a 100% ridership census on all service trips that are provided by the fixed-route system, in February of 2021 (during the 2-week period from Saturday, February 6th to Saturday, February 20th). Average weekday ridership was close to 1,000 boardings in February of 2021, which equates to 40% of February 2019's weekday average. Average Saturday ridership was close to 600 boardings, or 60% of weekday ridership. This decline in ridership was due to the COVID-19 pandemic, which was at its peak during the first months of year 2021. In fact, average weekday ridership on February of 2020 was higher than on February of 2019, just before the pandemic started.

Figure 4 on the next page, shows the location of all weekday boardings in the system by stop. The majority of boardings (75%) occur in Port Angeles and Sequim stops served by the urban routes 20, 22, 24 and 26, the intercity routes 14 and 30.

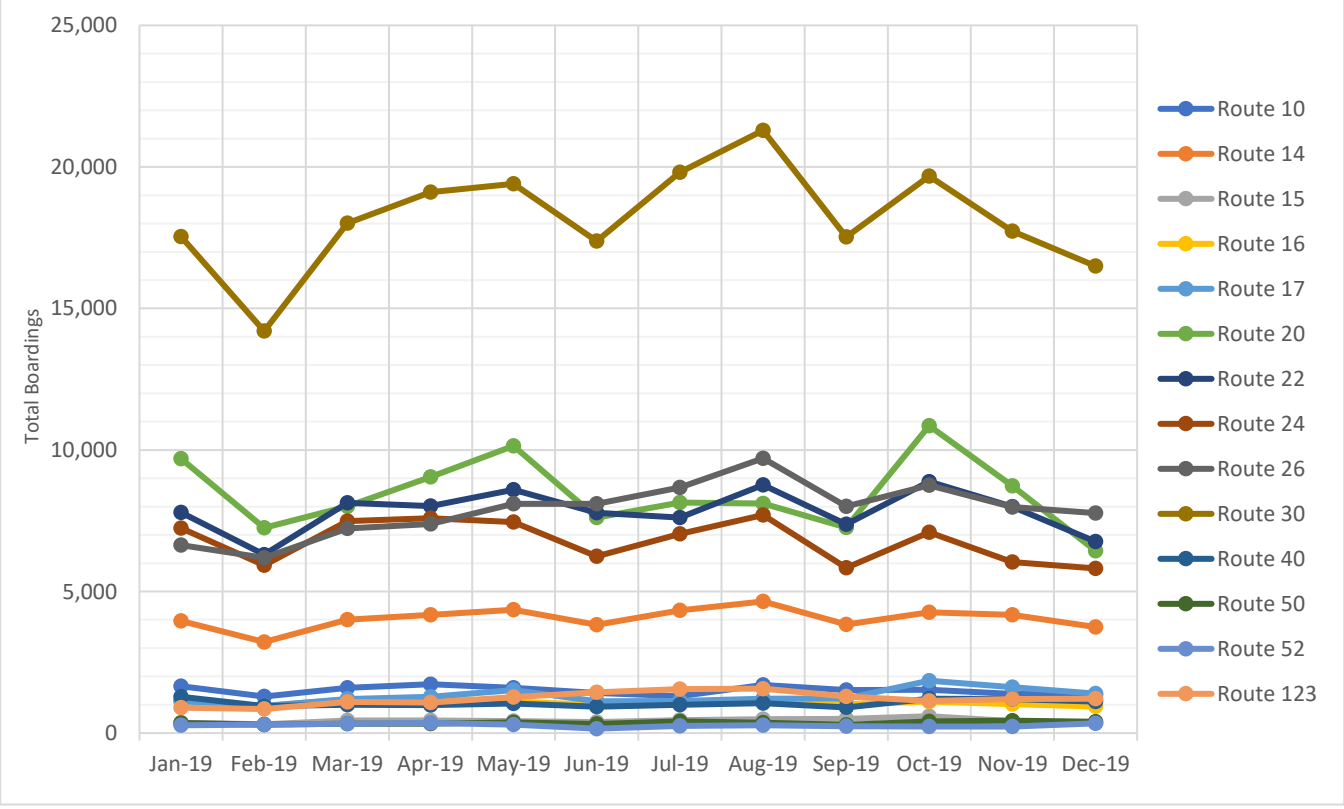
Figure 5 shows the location of all Saturday boardings in the system by stop. Again, the majority of boardings occur in the same routes and stops, replicating the same activity patterns of weekday.

Figure 2: Unlinked Trips versus Vehicle Revenue Hours 6-Year Trend



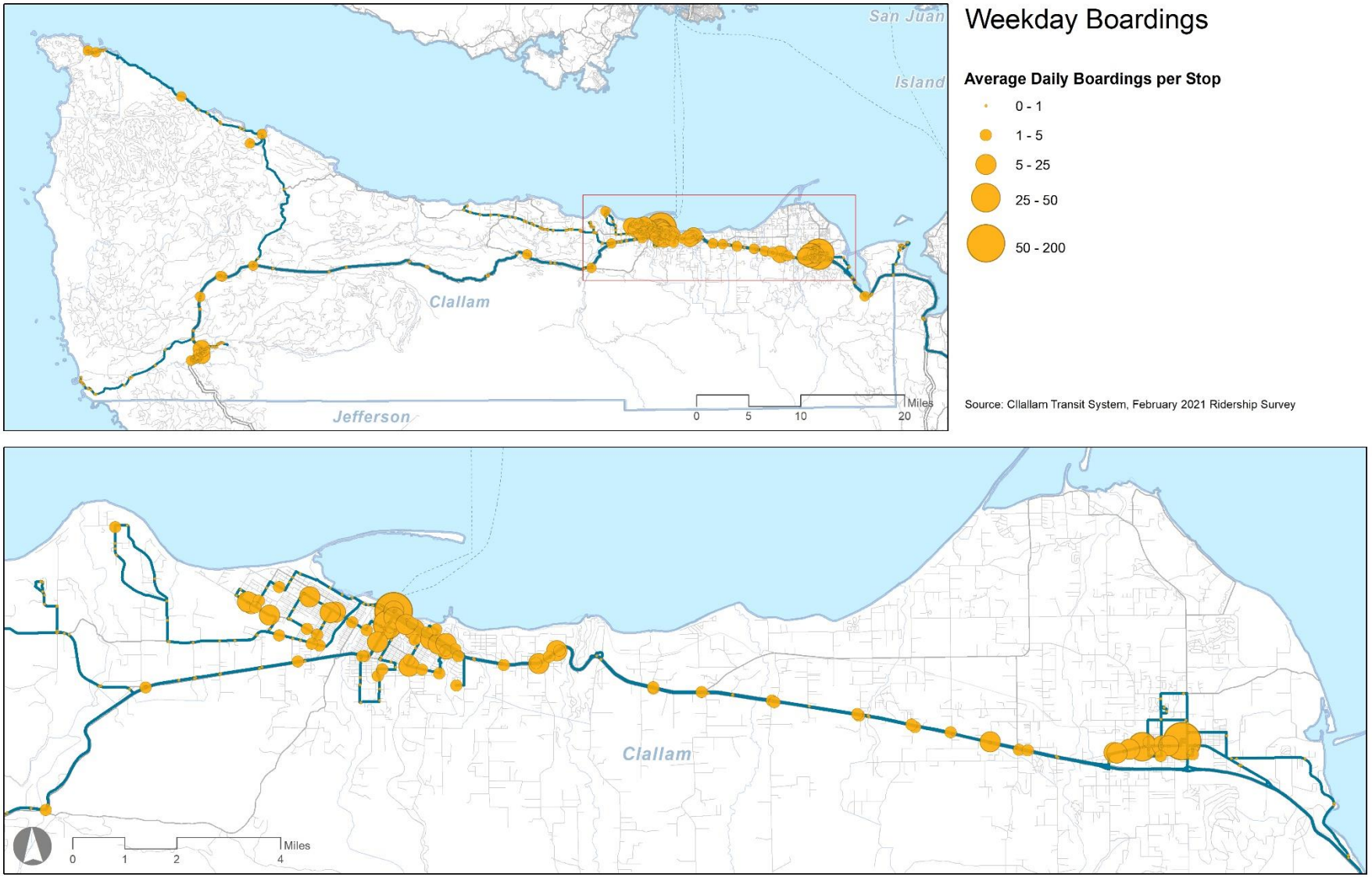
Source: National Transit Database Profiles 2014 - 2019

Figure 3: Monthly Ridership per Route in Year 2019 (pre COVID-19)



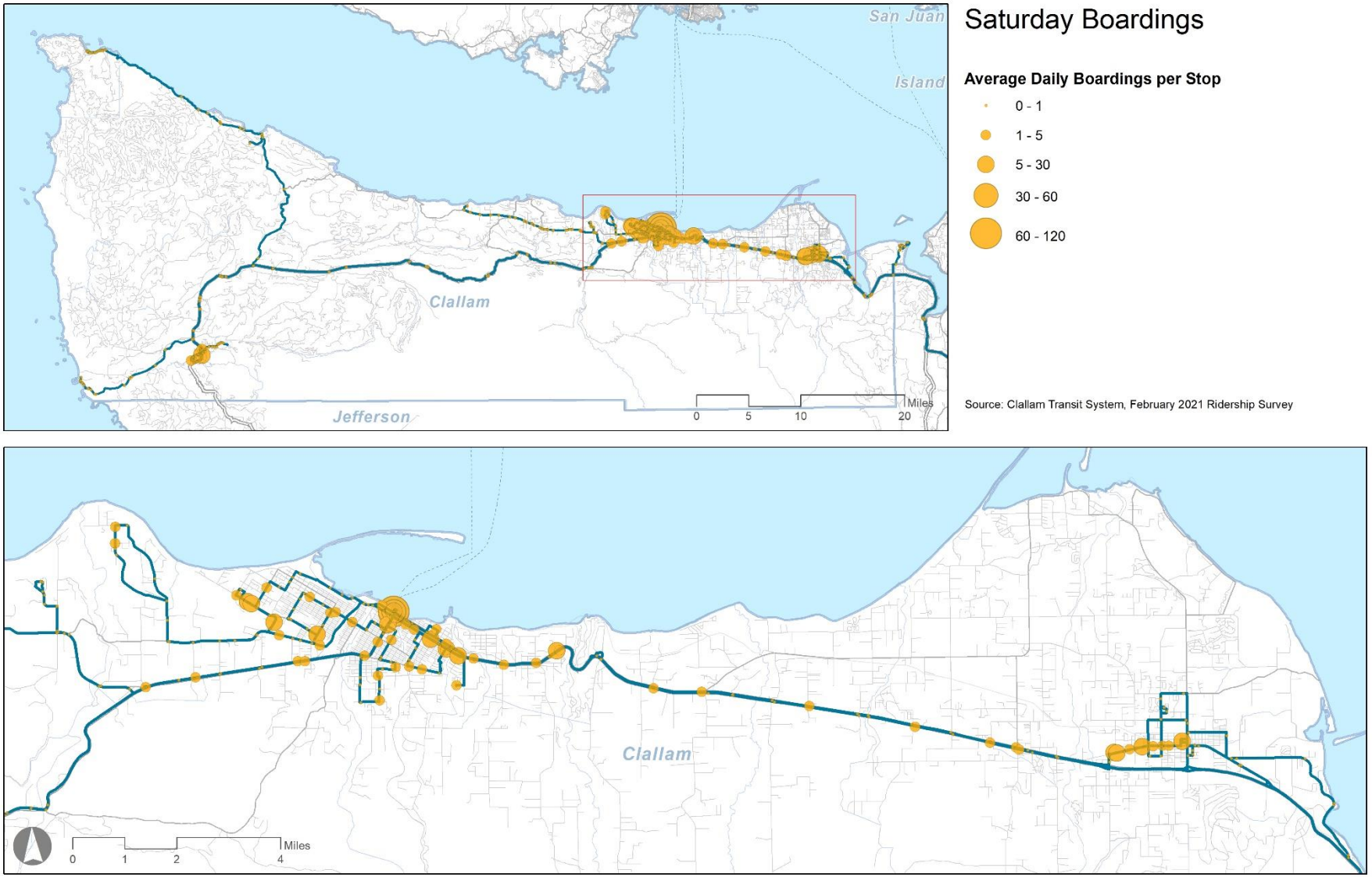
Source: Clallam Transit daily ridership reports for year 2019

Figure 4: Average Weekday Boardings



Source: Walker Consultants 2021

Figure 5: Average Saturday Boardings



Source: Walker Consultants 2021

System Performance

Performance per Service Type

For the purpose of analyzing the system's performance, routes were categorized into four groups – urban routes, community circulators, rural routes and intercity routes:

- Urban Routes – 20, 22, 24, 26
- Community Circulators – 17, 40
- Rural Routes – 10, 15, 16, 50, 52
- Intercity Routes – 14, 30, 123

Table 5 below shows that the average weekday ridership for year 2019 was 2,535 boardings. The Port Angeles urban routes comprised 50% of the system's ridership, followed by the intercity routes which captured 40% of weekday ridership. One-half of the system routes (5 rural routes and 2 community circulator routes) captured 10% of ridership only, a very low number of boardings.

Port Angeles routes recorded an average performance of 26.1 passengers per revenue hour (the standard measure of productivity for urban bus routes), which is a good level of performance as compared to other systems and considering the density and size of the Port Angeles market. Community Circulators recorded a very low performance with an average of 6.9 passengers per revenue hour. The average for the 14-route system was 14.3 passengers per revenue hour, a low level of performance that reflects the expense and resources that are dedicated to providing geographic coverage and lifeline services to outlying communities of the county.

Another measure of productivity is passengers per service trip. This measure better reflects the performance of long-distance services such as intercity and rural routes. Intercity routes were at the top with 13.3 passengers per service trip, about four times more than rural routes which recorded a performance of 3.8 passengers per service trip. Community Circulators had the lowest performance with only 2.9 passengers per trip.

Table 5: Productivity Indicators per Service Type

Service Type	Weekday Boardings	Revenue Hours	Revenue Miles	One-Way Trips	Passengers per Hour	Passengers per Mile	Passengers per Trip
Intercity	984	81.3	2,103	74	12.1	0.5	13.3
Rural	153	31.8	949	40	4.8	0.2	3.8
Urban	1,299	49.7	688	194	26.1	1.9	6.7
Circulator	99	14.4	190	34	6.9	0.5	2.9
Grand Total	**2,535**	**177.2**	**3,930**	**342**	**14.3**	**0.6**	**7.4**

Source: Walker Consultants 2021

Rural and Circulator services consume about 25 percent of vehicle revenue hours, the same as urban routes, however their performance per revenue hour and service trips is very low, which makes them candidates for restructuring or revisions of its service levels. CTS appears to be dedicating too many resources to seven routes that provide a very low return on investment.

Table 6 below provides a summary of service consumption and cost-efficiency indicators for each service tier. Service consumption is best reflected by the passenger miles indicator which shows not only ridership demand but also distance traveled. Intercity routes provide two-thirds of the passenger miles in the system, showing their importance in meeting mobility needs, but also the importance of making connections across urban centers.

Both intercity and rural service riders made trips of about 17 miles on average. On the other end of the spectrum, circulator routes generated the least amount of passenger miles due to low ridership and short trips (2.7 miles on average). Riders of urban services also made short trips of 3.7 miles on average.

Operating costs and service hours are highly related. About 50 percent of costs are spent on intercity routes, while urban routes receive 25 percent of operating costs. The remaining 25 percent is spent on rural and community circulator routes. Not surprisingly, the highest cost per passenger is recorded by rural and community circulator routes, which recorded an average cost of $37.1 and $22.1 per passenger trip. The average cost per passenger of intercity routes was also high at $14.2 per passenger trip, showing the expense of operating these routes and the level of commitment of CTS in providing transit services across the county.

The Percent Fare Recovery indicator shows the rate of operating costs that is recovered at the farebox, or from fare revenues. Urban routes recovered 17 percent of costs at the farebox. In contrast, community circulators and rural routes recovered 4.5 and 2.7 percent, respectively. Intercity routes recovered 13.6 percent at the farebox, a performance that was higher than the average for the system (11.7%), and closer to the performance of urban routes. The higher farebox recovery ratio of intercity routes is explained by higher fares ($1.50 on Routes 14 and 30, and $10 on Route 123). The fare on all other routes is $1.00.

Table 6: Efficiency Indicators per Service Type

Service Type	Passenger Miles	Average Trip Length	Operating Cost	% Fare Recovery	Cost per Passenger	Cost per Pass. Mile	Revenue Pass. Mile
Intercity	16,748	17.0	$ 14,002	13.6%	$ 14.2	$ 0.8	$ 0.11
Rural	2,735	17.8	$ 5,685	2.7%	$ 37.1	$ 2.1	$ 0.06
Urban	4,765	3.7	$ 7,617	17.1%	$ 5.9	$ 1.6	$ 0.27
Circulator	269	2.7	$ 2,188	4.5%	$ 22.1	$ 8.1	$ 0.37
Grand Total	**24,517**	**9.7**	**$ 29,493**	**11.7%**	**$ 11.6**	**$ 1.2**	**$ 0.14**

Source: Walker Consultants 2021

The disparity in cost of operation, cost per boarding and farebox revenue is perhaps better reflected in the Revenue per Passenger Mile indicator, which shows the amount of revenue that is collected for each passenger mile across all services. Rural routes recorded the lowest revenue per passenger mile indicator at only $0.06 per passenger mile. Intercity routes collected twice as much revenue per passenger mile ($0.11), closer to the average for the system which was $0.14 per passenger mile.

Performance per Route

Table 7 below provides a detailed summary of service productivity indicators for each route in the system:

- The highest weekday boardings average was obtained by Route 30 – Hwy 101 Commuter (763 boardings), followed by the Port Angeles urban routes 20, 22, 24 and 26.
- The highest passenger per revenue hour indicator was recorded by Route 22 – Lincoln/Peabody (30.6 passenger per hour).
- The highest passenger per trip average was also recorded by Route 30 – Hwy 101 Commuter (14.1 passenger per trip).
- Route 14 – Forks generated on average, the largest number of passenger miles.
- Route 123 – the Strait Shot's riders traveled the longest distance (61 miles) on average, for each passenger trip.

Table 7: Service Productivity per Route

Route	Name	Weekday Boardings	Passengers per Hour	Passengers per Mile	Passengers per Trip	Passenger Miles	Average Trip Length
14	Forks	170	5.9	0.2	10.6	6,930	40.8
30	Hwy 101 Commuter	763	18.2	0.9	14.1	6,702	8.8
123	The Strait Shot	51	5.0	0.2	12.8	3,116	61.0
Intercity Total		984	**12.1**	**0.5**	**13.3**	**16,748**	**17.0**
10	Joyce	63	7.4	0.2	5.3	757	12.0
15	La Push	18	5.4	0.2	3.0	194	10.7
16	Neah Bay	45	3.3	0.1	5.7	1,574	34.7
50	Jamestown	15	6.0	0.3	1.9	79	5.3
52	Diamond Point	11	3.1	0.1	1.9	130	11.3
Rural Total		153	**4.8**	**0.2**	**3.8**	**2,735**	**17.8**
20	College/Medical Center	354	28.2	2.5	7.1	910	2.6
22	Lincoln/Peabody	329	30.6	2.8	6.9	529	1.6
24	Cherry Hill	285	22.6	1.7	5.1	594	2.1
26	Westside	331	23.9	1.2	8.3	2,731	8.3
Urban Total		1,299	**26.1**	**1.9**	**6.7**	**4,765**	**3.7**
17	Forks Shuttle	55	7.5	0.5	3.4	119	2.2
40	Sequim Shuttle	44	6.3	0.5	2.5	150	3.4
Circulator Total		99	**6.9**	**0.5**	**2.9**	**269**	**2.7**
Grand Total		**2,535**	**14.3**	**0.6**	**7.4**	**24,517**	**9.7**

Source: Walker Consultants 2021

Table 8 below provides a detailed summary of service efficiency indicators for each route in the system:

- The most expensive routes that CTS operate are the intercity routes 14 and 30, which costed roughly $5,300 and $6,900 per weekday, on average. The cheapest route was Route 50 – Jamestown which only costed $420 per weekday.
- Route 123 – The Straight Shot had the highest farebox recovery ratio at 28.3 percent. The lowest farebox recovery ratio was recorded by Route 16 – Neah Bay at 1.8 percent only.
- Route 16 – Neah Bay also had the highest cost per passenger at $54.8 per boarding. The lowest cost per boarding was recorded by Route 22 – Lincoln/Peabody at $4.9 per boarding.
- Route 22 – Lincoln/Peabody also had the highest revenue per passenger mile ($0.62), while Route 16 – Neah Bay had the lowest average at only 6 cents per passenger mile.

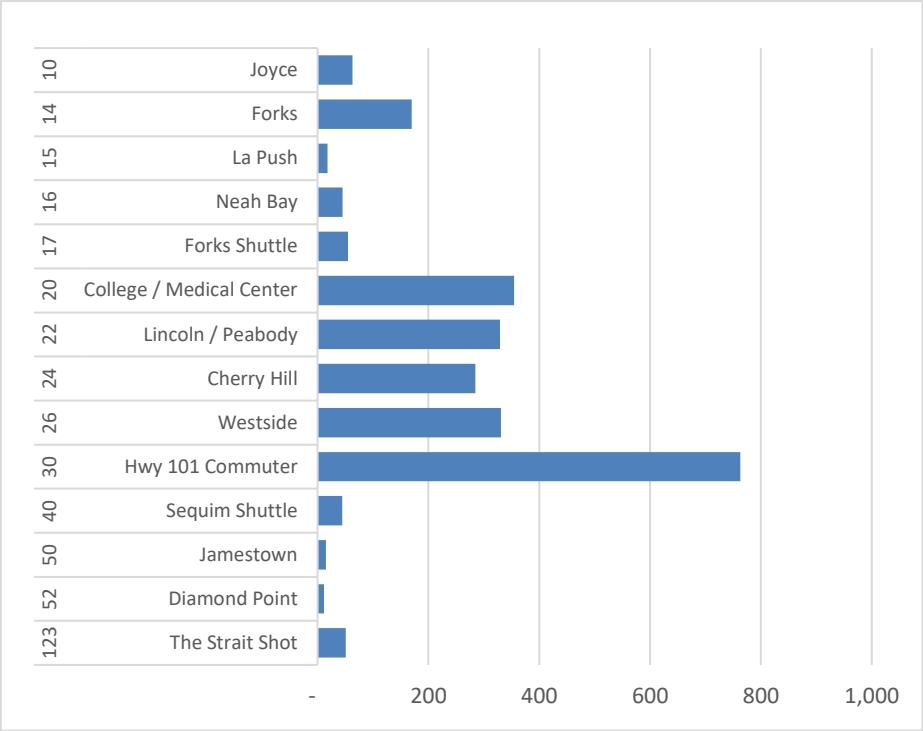
Table 8: Service Efficiency per Route

Route	Name	Weekday Boardings	Operating Cost	% Fare Recovery	Cost per Passenger	Cost per Pass. Mile	Revenue Pass. Mile
14	Forks	170	$ 5,268	4.8%	$ 31.0	$ 0.8	$ 0.04
30	Hwy 101 Commuter	763	$ 6,930	16.5%	$ 9.1	$ 1.0	$ 0.17
123	The Strait Shot	51	$ 1,804	28.3%	$ 35.3	$ 0.6	$ 0.16
Intercity Total		**984**	**$ 14,002**	**13.6%**	**$ 14.2**	**$ 0.8**	**$ 0.11**
10	Joyce	63	$ 1,565	4.0%	$ 24.8	$ 2.1	$ 0.08
15	La Push	18	$ 595	3.0%	$ 32.8	$ 3.1	$ 0.09
16	Neah Bay	45	$ 2,484	1.8%	$ 54.8	$ 1.6	$ 0.03
50	Jamestown	15	$ 420	3.6%	$ 27.8	$ 5.3	$ 0.19
52	Diamond Point	11	$ 620	1.9%	$ 54.0	$ 4.8	$ 0.09
Rural Total		**153**	**$ 5,685**	**2.7%**	**$ 37.1**	**$ 2.1**	**$ 0.06**
20	College/Medical Center	354	$ 1,870	18.9%	$ 5.3	$ 2.1	$ 0.39
22	Lincoln/Peabody	329	$ 1,595	20.6%	$ 4.9	$ 3.0	$ 0.62
24	Cherry Hill	285	$ 1,914	14.9%	$ 6.7	$ 3.2	$ 0.48
26	Westside	331	$ 2,237	14.8%	$ 6.8	$ 0.8	$ 0.12
Urban Total		**1,299**	**$ 7,617**	**17.1%**	**$ 5.9**	**$ 1.6**	**$ 0.27**
17	Forks Shuttle	55	$ 1,129	4.8%	$ 20.6	$ 9.5	$ 0.46
40	Sequim Shuttle	44	$ 1,059	4.2%	$ 23.9	$ 7.0	$ 0.29
Circulator Total		**99**	**$ 2,188**	**4.5%**	**$ 22.1**	**$ 8.1**	**$ 0.37**
Grand Total		**2,535**	**$ 29,493**	**11.7%**	**$ 11.6**	**$ 1.2**	**$ 0.14**

Source: Walker Consultants 2021

Productivity and Efficiency Analysis

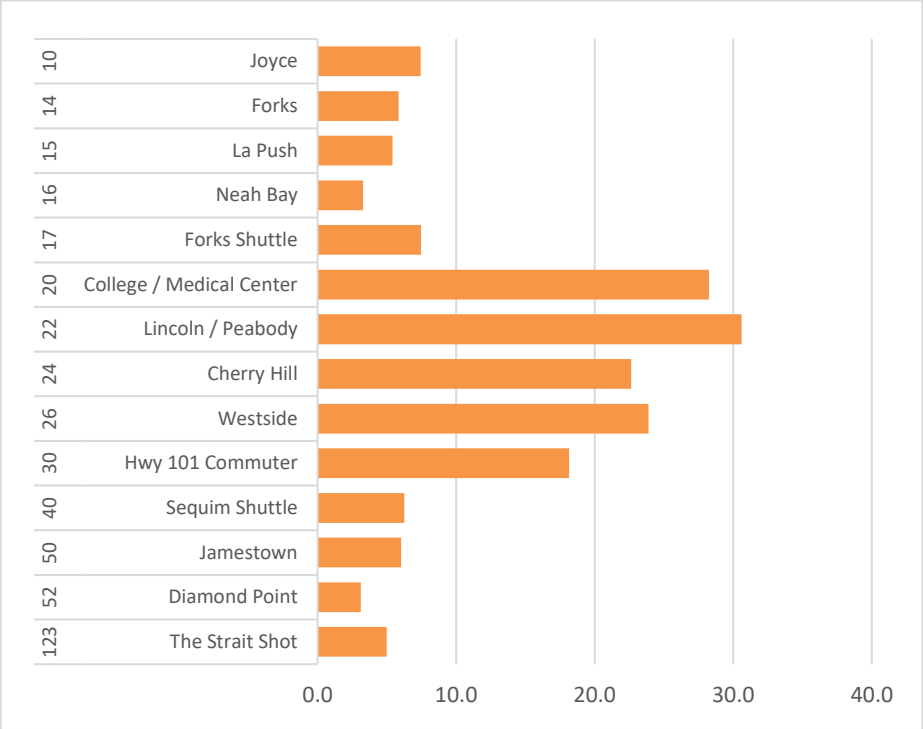
Figure 6: Weekday Boardings



Source: Walker Consultants 2021

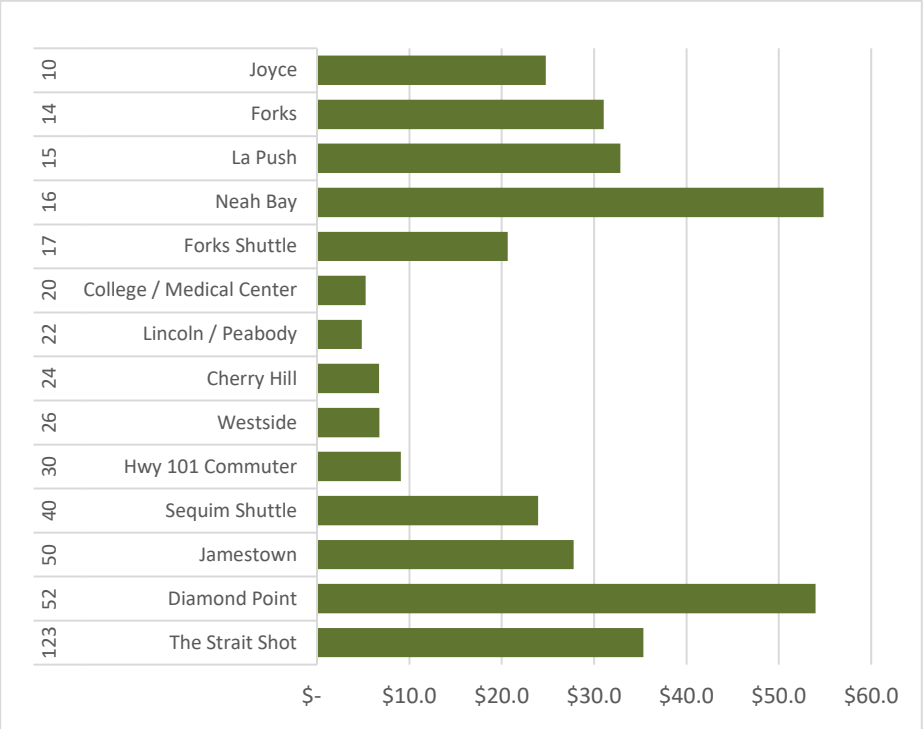
Weekday boardings and passengers per revenue hour performance was higher on the Port Angeles urban routes 20, 22, 24 and 26, and the Hwy 101 Commuter (Route 30)

Figure 7: Passengers per Hour



Source: Walker Consultants 2021

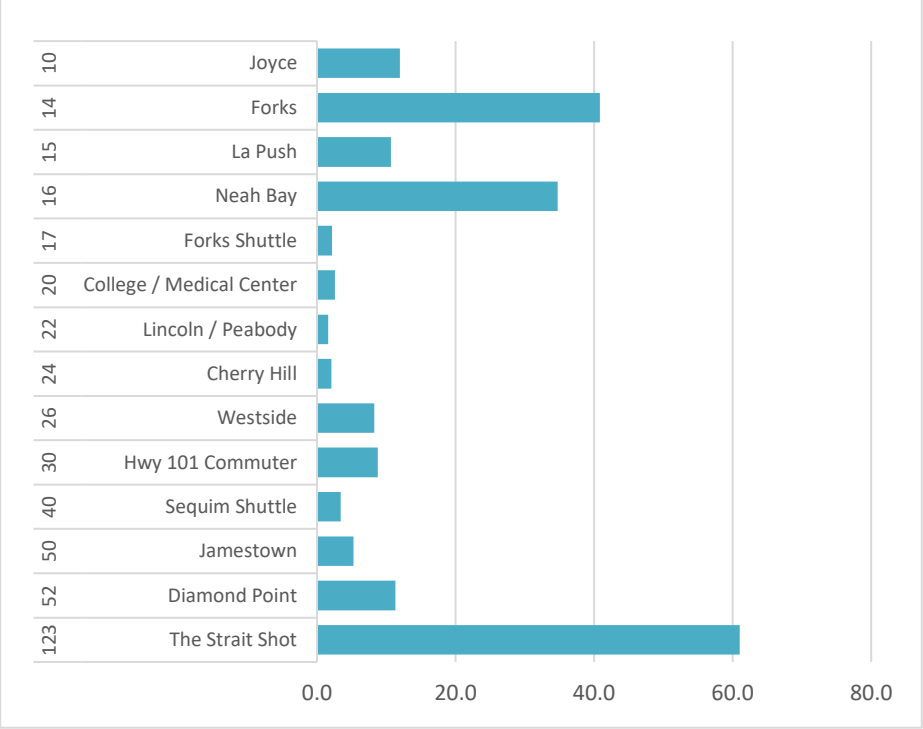
Figure 8: Cost per Passenger



Source: Walker Consultants 2021

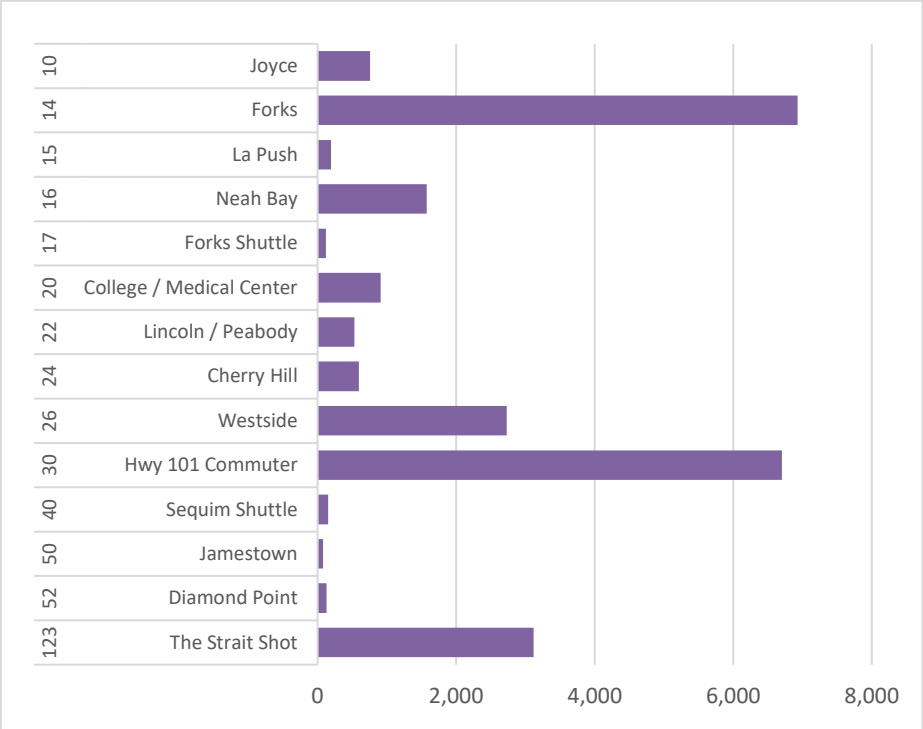
Operating costs per passenger were lower on the Port Angeles routes and the Hwy 101 Commuter. Route 16 to Neah Bay and Route 52 to Diamond Point had the highest average cost per passenger.

Figure 9: Average Trip Length (miles)



Source: Walker Consultants 2021

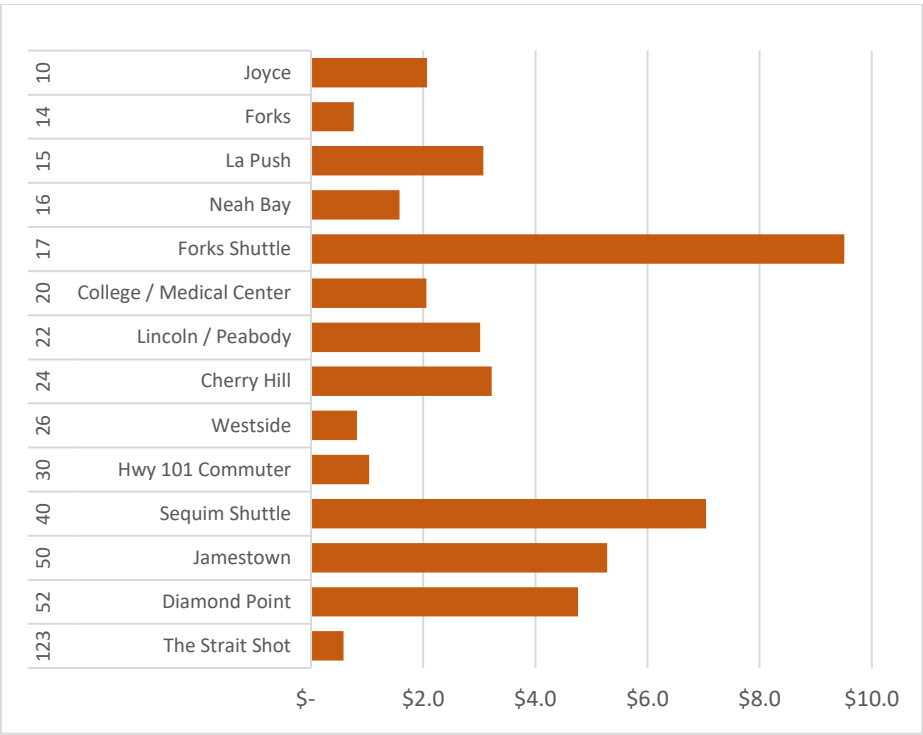
Figure 10: Passenger Miles



Intercity routes to Forks, Sequim, and the Bainbridge Island Ferry Terminal had two-thirds of passenger miles in the system.

Source: Walker Consultants 2021

Figure 11: Cost per Passenger Mile



The Forks shuttle and Sequim shuttles had the highest cost per passenger mile due to very low ridership and riders making short trips.

Source: Walker Consultants 2021

Financial Analysis

This section reviews the current fare structure at Clallam Transit, farebox revenue and recovery ratio, and financial position of the agency in the next five years, to understand whether CTS can increase its financial performance and the cost of adding additional service to grow ridership and address unmet needs.

Fare Analysis

Current Fares

Clallam Transit's base fare is $1.00. This fare has been in place since July of 2014, when the fare structure was changed simplifying the zone system to a regular and premium route fare structure. The base fare is for a single ride only, with no transfers. Every transfer between routes in the system requires an additional fare payment. The system does provide the option to purchase a Day Pass for $3.00 and monthly passes, in addition to reduced fares for seniors 65 years old and older, persons with disabilities and youth 6 to 19 years of age.

- **Regional Reduced Fare Permit (RRFP)**. Seniors 65 years old and older and persons with disabilities are eligible for a Regional Reduced Fare Permit. There is a one-time application fee of $3.00, that requires proof of eligibility and filling an application. The pass is a Clallam Transit issued picture ID card that allows holders to discounted transit fares throughout the Puget Sound region.
- **Peninsula College Transit Pass**. All peninsula college students have access to a bus pass that allows them to ride for free on any Clallam Transit and Jefferson Transit service. The pass is an annual contract with both agencies that costs $8.00 to all students.
- **Children**. Children under 6 years of age ride for free when accompanied by an adult. The limit is 3 children per riding adult.

Table 9: Clallam Transit Fare Types and Categories

Fare Type	Regular Routes	Premium Routes	The Strait Shot	Dial-A-Ride
Single Adult	$1.00	$1.50	$10.00	$2.00
Single Reduced (RRFP)	$0.50	$1.00	$5.00	$1.50
Single Youth (6 - 19 years old)	$0.50	$1.00	$5.00	$1.50
Children (under 6 years old)	Free	Free	Free	Free
Day Pass	$3.00	$3.00	n/a	$3.00
Monthly Pass Adult	$36.00	$54.00	$5.00 per ride	$54.00
Monthly Pass with RRFP	$18.00	$36.00	$5.00 per ride	$54.00
Monthly Pass Youth	$18.00	$36.00	$5.00 per ride	$54.00
Peninsula College Transit Pass Holders	Free	Free	$5.00 per ride	n/a

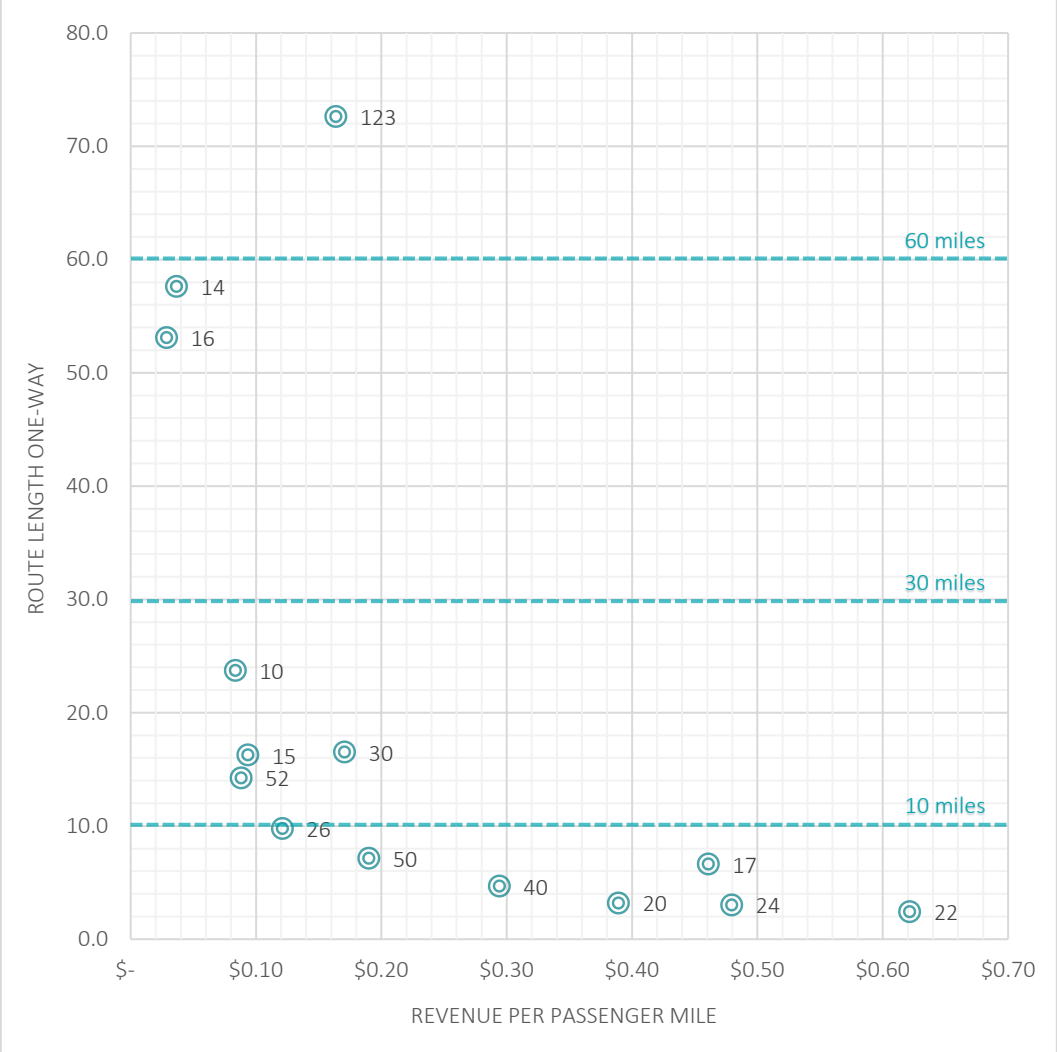
Source: Clallam Transit System

CTS passengers can pay for their fare with cash, exact fare only, no change, or through a mobile application. CTS has a contract with Token Transit for payment and collection of fares via mobile phone. Token Transit allows for mobile payment of all fare types in the system via Apple Pay, Google Pay or credit card. Users can also be provided with a pass by a different user.

Fare Recovery Analysis

The system's fare recovery – in year 2019, pre COVID-19, was 11.7% across the board. From a benchmarking standpoint this not a good or bad performance. As a way of comparison, the State of California, through its Transportation Development Act funding system, requires urban transit systems to recover at least 20 percent of costs at the farebox, and rural transit systems to recover at least 10 percent of costs. Clallam Transit is a mixed system that operates routes in urban areas and rural areas, therefore a more appropriate comparison would be to look at the performance of routes by type of service – urban, intercity, and rural. Table 6 on page 18, shows that average farebox recovery for urban, intercity and rural routes was 17%, 14% and 3% respectively.

Figure 12: Revenue per Passenger Mile versus Route Length

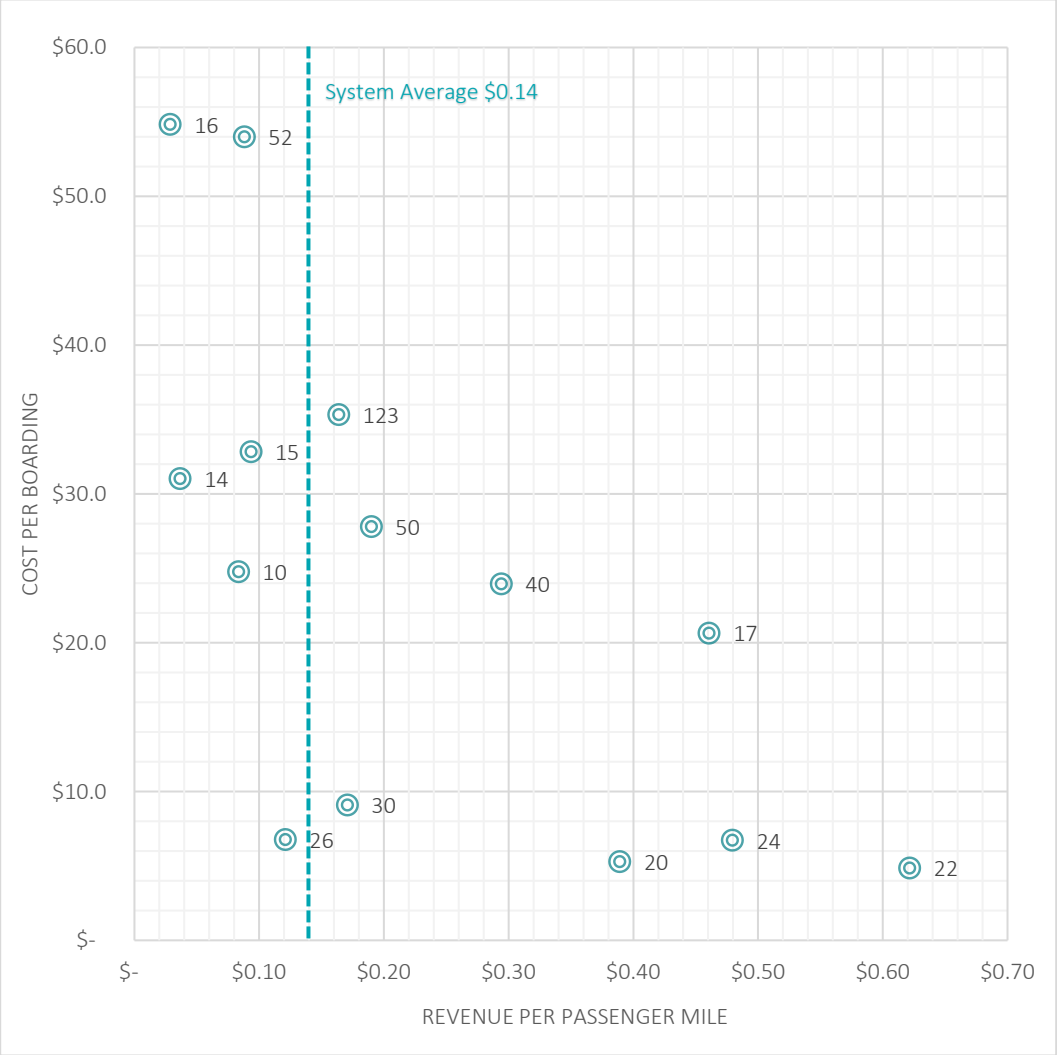


Source: Walker Consultants 2021

Figure 12 above provides an analysis of fare revenue by route, by comparing the length of the route with the revenue per passenger mile that was collected on each route. It is a simple way of showing passenger consumption of service and cost of operation per route. The main finding of this chart is that the length of the route dictates the cost of operating the service and that if fares are not set correctly, the revenue that is collected for each passenger and passenger mile may not reflect the real value of operating the service.

Figure 13 below explores this issue further by comparing the revenue per passenger mile with the operating cost per passenger boarding for each route. The main finding of this chart is that current fares generate significantly higher revenue per passenger mile on urban routes, and that urban routes farebox revenue subsidizes passenger boardings on rural and intercity routes.

Figure 13: Revenue per Passenger Mile versus Cost per Boarding



Source: Walker Consultants 2021

The length of the route increases the cost of operation, cost per passenger, and cost per passenger mile. Raising fares on rural and intercity routes, would be fair to all users of the system, would increase farebox recovery of the system and allow CTS to maintain current service levels overtime.

Capital and Operations Reserves

As part of the comprehensive operational analysis, we reviewed CTS's budget and reserve fund to understand the financial position of CTS for at least the next five years. CTS has amassed a budget reserve of $13.2 million for Fiscal Year (FY) 2021, in part due to additional federal pandemic relief funding. This amounts to approximately 14 months of operating expenditures.[1] Table 10 shows the CTS's recent history and forecasted budget revenues, expenditures, and reserves. CTS is projected to build a reserve of $17.2 million for FY 2022.

Table 10: Capital and Operations Reserves Projections

Actual/Forecast Year	Beginning Reserve	Revenues	Expenditures	Ending Reserve
Actual 2018	$3,807,270	$10,686,783	$10,064,626	$4,429,427
Actual 2019	$4,429,277	$11,008,784	$10,531,184	$4,906,877
Actual 2020	$4,906,554	$13,773,046	$10,194,585	$8,485,015
Budget 2021	$7,946,530	$12,695,940	$11,319,795	$9,322,675
Revised 2021	$8,485,015	$16,056,375	$11,249,666	$13,291,724
2022 Budget	**$13,291,724**	**$15,321,505**	**$11,407,903**	**$17,205,326**
2023 Forecast	$17,205,326	$11,338,717	$11,724,851	$16,819,192
2024 Forecast	$16,819,192	$11,483,730	$12,025,321	$16,277,601
2025 Forecast	$16,277,601	$11,575,173	$12,277,059	$15,575,715
2026 Forecast	$15,575,715	$11,668,357	$12,548,292	$14,695,780

Source: Clallam Transit Capital and Operations Budget for FY 2022

CTS's ridership and fare revenue for FY 2021 are below projections, while operating expenses keep growing. The temporary infusion of funds from the Coronavirus Response and Relief Supplemental Appropriations (CRRSA) Act, will provide relief for the next 5 to 10 years. Despite needing to cover net losses in future years, under a status quo projection with no additional revenues, some reserve funds could be used for a modest expansion of service in the next 5-10 years.

While CTS is in a favorable position in regard to its accumulated reserves, beginning in FY 2023, the system is forecasted to use reserves to fill the gap between revenues and expenditures. The gap between revenues and expenditures is projected to grow annually to approximately $880,000 beginning in FY 2026. This is shown in Table 11 below.

However, reserves will still be at $14,7 million at the end of FY 2026, which means that CTS will be in a position to make selected investments of up to $1 million per year, for the next 5 years, for a not to exceed $5 million total, in additional fixed-route and complementary paratransit service.

[1] Clallam System Transit operating expenditures are approximately $977,000 per month.

Table 11: Operations and expenditures projection

Actual/Forecast Year	Total Revenues	Total Expenditures	Difference
Actual 2018	$10,686,783	$10,064,626	$622,157
Actual 2019	$11,008,784	$10,531,184	$477,600
Actual 2020	$13,773,046	$10,194,585	$3,578,461
Budget 2021	$12,695,940	$11,319,795	$1,376,145
Revised 2021	**$16,056,375**	**$11,249,666**	**$4,806,709**
2022 Budget	$15,321,505	$11,407,903	$3,913,602
2023 Forecast	$11,338,717	$11,724,851	($386,134)
2024 Forecast	$11,483,730	$12,025,321	($541,591)
2025 Forecast	$11,575,173	$12,277,059	($701,886)
2026 Forecast	$11,668,357	$12,548,292	($879,935)

Source: Clallam Transit Capital and Operations Budget for FY 2022

Marginal Cost

The Clallam Transit System's costs of operating the fixed-route service are grouped into four categories that include: admin, operations and maintenance personnel wages and benefits, admin and maintenance facilities supplies and services. Table 12 below provides a breakdown of costs for each category and allocating costs of direct labor into vehicle hours costs, maintenance supplies into vehicle miles costs, and admin and maintenance facilities costs into overhead costs.

Table 12: CTS Fixed-Route Cost Allocation

Fixed-Route Cost Allocation	Vehicle Hours Costs	Vehicle Miles Costs	Overhead Costs	Total Fixed Route Costs
Wages	$ 2,171,781	$ 403,270	$ 1,613,319	$ 4,188,370
Benefits	$ 1,212,351	$ 199,473	$ 749,279	$ 2,161,103
Supplies	$ 274,900	$ 342,096	$ 103,371	$ 720,367
Services	$ 98,318	$ 33,242	$ 783,987	$ 915,547
Transfers Out	$ -	$ -	$ 350,879	$ 350,879
Total	**$ 3,757,350**	**$ 978,081**	**$ 3,600,835**	**$ 8,336,266**
Percent	45.1%	11.7%	43.2%	100.0%

Source: Clallam Transit Capital and Operations Budget for FY 2022, Walker Consultants 2021

Table 12 shows that the costs of operating the fixed-route service in year 2020 were $8.3 million of which 45 percent were dedicated to direct operation labor, 12 percent were dedicated to vehicle operation and maintenance, and 43 percent were dedicated to administration and overhead.

Table 13 calculates the cost of operating each vehicle hour and mile of fixed-route service, to estimate the marginal cost of operating each additional hour of service with the current admin and overhead resources.

Table 13: CTS Fixed-Route Marginal Cost of Operation

Fixed-Route Marginal Cost	Vehicle Hours	Vehicle Miles	Marginal Cost per Vehicle Hour
Annual Operating Cost	$ 3,757,350	$ 978,081	$ 4,735,431
Annual Hours & Miles	50,377	1,090,582	50,377
Average Cost	**$ 74.58**	**$ 0.90**	**$ 94.00**

Source: Clallam Transit Capital and Operations Budget for FY 2022, Walker Consultants 2021

The marginal cost of providing each additional hour of service, on the fixed-route system, with the existing fleet, facility and admin resources amounts to an average of $94.00 per vehicle hour.

However, any new investment in the fixed-route service, such as increasing hours of service, needs to consider additional service hours of complementary ADA paratransit service. CTS financials show that the cost of providing paratransit service amounts to 17 percent of the total operating costs, and $57.37 per vehicle hour.

Therefore, for each $300,000 investment per year in additional service, CTS would be able to provide:

- 5.2% increase in fixed-route vehicle service hours, which would amount to
- 2,611 additional vehicle service hours per year, and
- 3.1% increase in ADA paratransit vehicle service hour, which would amount to
- 952 additional vehicle service hours per year

If CTS were to invest $1 million per year, it would be able to operate and additional 8,700 vehicle hours and increase the fixed-route service by 17 percent. ADA paratransit service would increase 11 percent and about 3,200 additional vehicle hours.

Market Analysis

Demographic Characteristics

The most recent American Community Survey Five-Year Estimate 2015-2019 shows the population of Clallam County was 75,392 people. The population of the cities of Port Angeles, Sequim and Forks were estimated at 30,908, which amounts to 40 percent of the total population in the county. This means that 60 percent of the population lives outside of the cities' administrative boundaries in smaller communities and rural areas.

The median household income (MHI) of Clallam County households was estimated at $52,192 and it is lower than the average for the state. The MHI for the cities of Port Angeles, Sequim and Forks is lower than the county's average, which suggests that many residents living outside the cities' boundaries are more affluent.

The average size of households for the county was estimated at 2.03 and it is also lower than the state which is 2.38. Sequim had the lowest average household size, reflecting its large presence of seniors and retired residents, while Forks had the highest average, reflecting a larger presence of families. These figures are confirmed by the median age of the population estimates where the county had a median age of 50.8 years, much higher than the state, Forks had a median age of 32.3 years, much lower than the county average, and Sequim had a median age of 56.5 years, which is higher than the county average.

Table 14 below shows the ACS Five-Year Estimates for selected demographic characteristics of the county and its major cities.

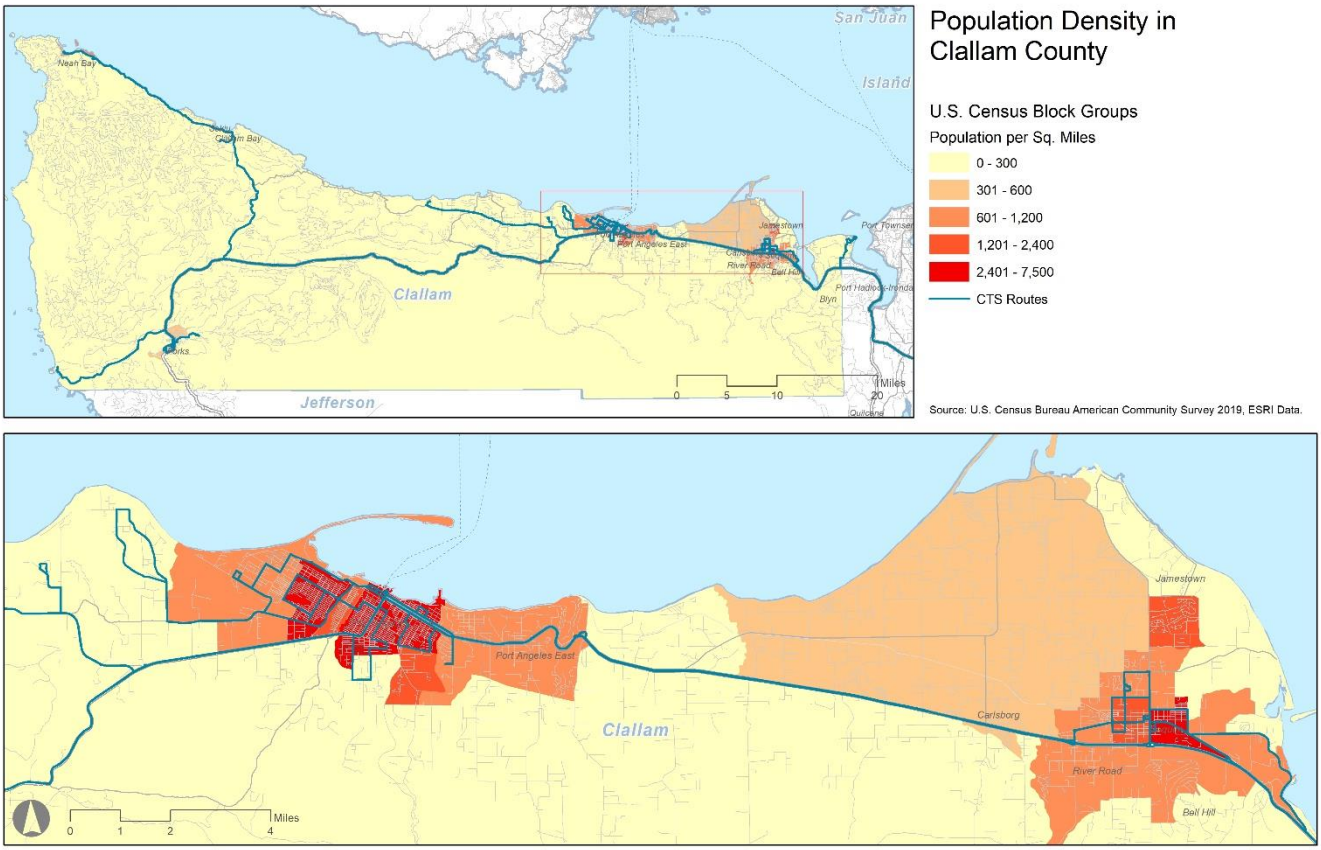
Table 14: Demographic Characteristics of Clallam County Population

Demographics	Port Angeles	Sequim	Forks	Clallam County	WA State
Total Population	19,832	7,248	3,828	**75,392**	7,614,893
Median Household Income	$47,256	$40,155	$38,984	**$52,192**	$78,687
Housing Units	9,541	3,683	1,619	**37,110**	3,195,098
Household Size*	2.08	1.97	2.36	**2.03**	2.38
Poverty Rate	17.4%	13.6%	28.0%	**14.5%**	9.8%
Employment Rate	51.1%	40.9%	64.2%	**44.9%**	61.2%
Median Age	38.9	56.5	32.3	**50.8**	37.9
Children under 5 years old	6.4%	4.7%	7.3%	**4.7%**	6.0%
Seniors 65 years and older	21.3%	36.6%	10.4%	**28.8%**	15.9%
Veterans	12.6%	16.5%	8.7%	**14.5%**	8.9%
Population with Disabilities	18.1%	27.1%	12.1%	**20.0%**	12.7%
White Population	86.9%	86.0%	85.7%	**87.7%**	74.2%
American Indian Population	2.8%	1.1%	3.8%	**4.9%**	1.4%

Source: American Community Survey Five-Year Estimate 2015-2019
* Calculated as the ratio between Total Population and Housing Units, as an approximation. The Number of Households and Average Household Size metric were not available for all geographic areas.

Table 14 also shows that the poverty rate for the county was estimated at 14.5 percent which is higher than the state. Among the cities, Forks had the higher poverty rate at 28 percent, while Sequim had the lowest poverty rate at 13.6 percent. The employment rate (or percentage of the population within the labor force) in the county is also lower than the state. Forks has the highest percentage at 64.2 percent (higher than the state average), while Sequim had the lowest percentage at 40.9 percent. Port Angeles is in the middle, perhaps due to a combination of families, seniors and college students.

Figure 14: Population Density



Source: Walker Consultants 2021

Figure 14 above shows the distribution of the population in the county and its relative density per square mile. The county's mountainous terrain is largely uninhabited and within the boundaries of the Olympic National Park. County residents live in the coastal areas and small valleys between the coast and the Olympics mountains.

In general, population densities that support urban transit operations are at least 6,000 residents per sq. mile. Outside of the major urban areas of Port Angeles, Sequim and Forks, there are pockets of low residential density in Neah Bay, Clallam Bay and La Push (about 300 – 600 residents per sq. mile). The highest population density areas are found in Port Angeles and Sequim (over 2,400 per sq. mile).

The map also shows that residential areas outside of Port Angeles and Sequim such as East Port Angeles, Carlsborg, and developments south of Highway 101, toward the mountains, include large numbers of residents in low density areas of 300 – 1,200 residents per sq. mile.

Employment Market

Figure 15 shows the location of all jobs in Clallam County, according to the data collected by the Unites States Census Bureau's Longitudinal Employment and Household Dynamics (LEHD), which combines commute-to-work information from the ACS Five-Year Estimates, Unemployment, and Earnings and Wages reports.

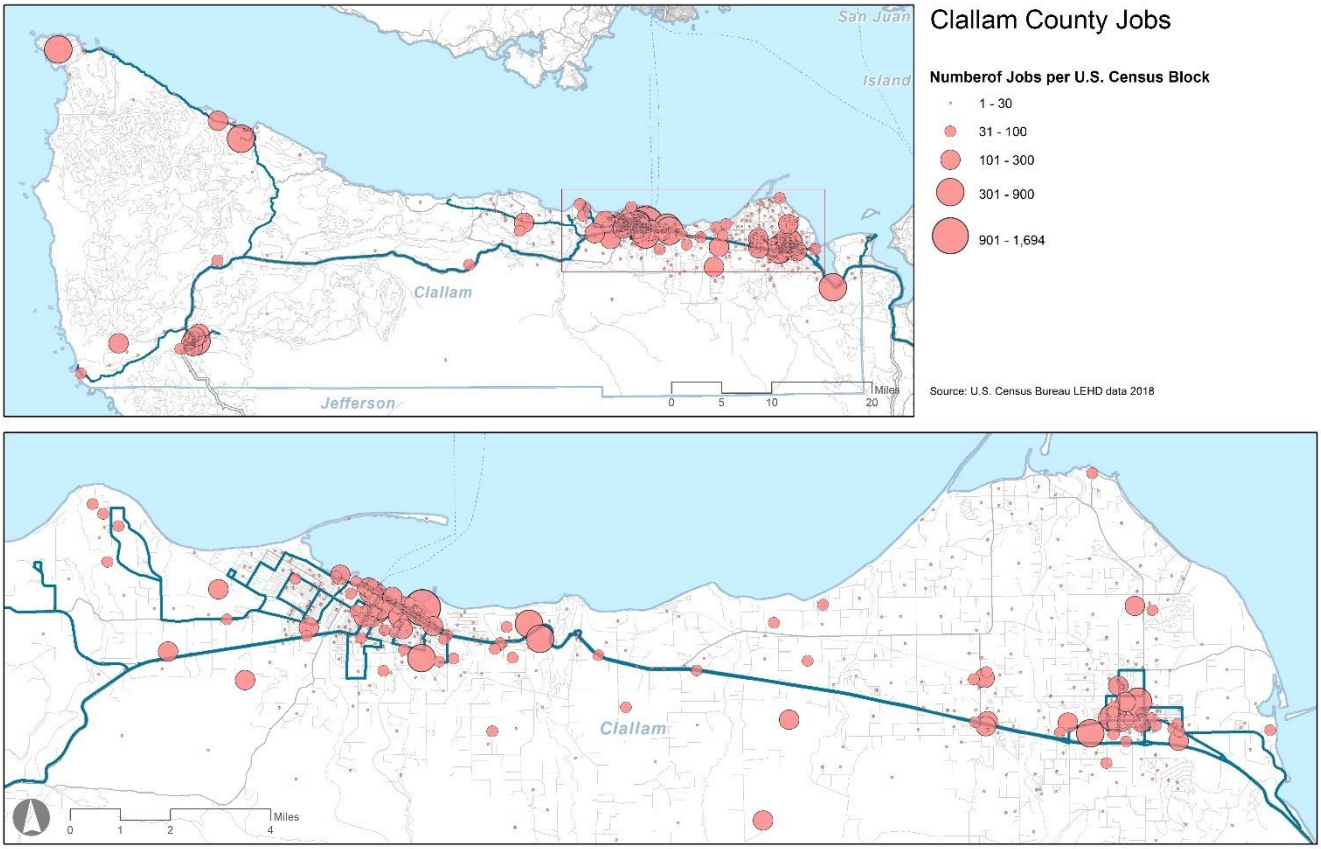
Clallam County jobs are largely concentrated in Port Angeles, Sequim, and places in between along the highway 101 corridor. Other pockets of jobs are found in Forks and Clallam Bay and in Cape Flattery, in the north-western-most point in the contiguous United States.

The most recent LEHD statistics show that in year 2018 there were 22,206 persons employed in Clallam County, of those:

- 4,922 were employed in the county but lived outside of it, in neighboring counties, and
- 17,284 lived and worked in the county

Also, there were 30,218 workers living in Clallam County, of which 12,934 lived in the county but were employed outside of it, also in neighboring counties, which means that there are many work trips that are cross-county between Port Angeles- Sequim and Jefferson County, but also between Forks and Jefferson County.

Figure 15: Location of Jobs in Clallam County



Source: U.S. Census Bureau, Longitudinal Employment Household Dynamics (LEHD) 2018.

Commute Patterns

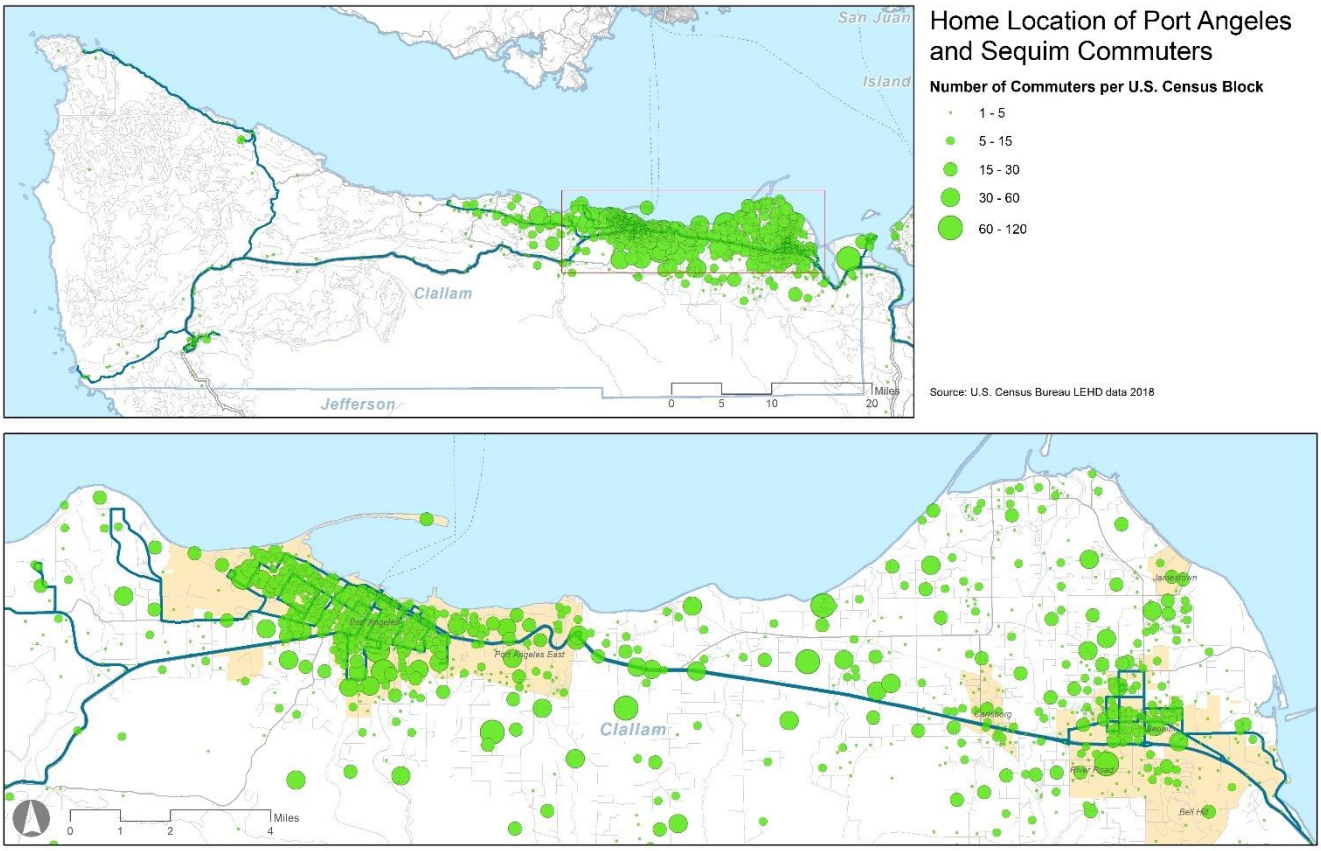
Figure 16 below shows the home locations of Port Angeles, East Port Angeles, and Sequim workers, those that live and work in the three cities, and those that work at job locations within their boundaries but commute from places outside of them. The combination of both Figure 15 and Figure 16 provide an idea of commute patterns within the county, by showing where most commuters live and where they work.

The most recent LEHD statistics for Port Angeles and East Port Angeles show that there were 10,489 commuters working in the Port Angeles urban area, of those:

- 4,651 commuters lived and worked in Port Angeles and East Port Angeles, and
- 5,838 commuters worked in PA and East PA, but came from places outside the PA urban area

Also, the figures show that 10,799 commuters live in Port Angeles and East Port Angeles, but 6,148 of them commute to work locations outside the urban area.

Figure 16: Home Location of Port Angeles and Sequim Commuters



Source: U.S. Census Bureau, Longitudinal Employment Household Dynamics (LEHD) 2018.

For Sequim, the LEHD data shows there were 4,455commuters employed in the city, of which:

- 648 lived and worked in Sequim, and
- 3,807 commuters came to work in Sequim, but lived outside the city

Also, 2,629 commuters lived in Sequim, but 1,981 of them commuted to work locations outside the city.

The location of jobs, workers homes and commute patterns show that there are many work trips that cross county boundaries, in both directions, for those coming to work in Clallam County and those going to work outside the county.

They also show that there are many intra-county trips between the county's major urban centers, and especially between the Port Angeles urban area and Sequim urban area, and in a secondary category between the Port Angeles urban area and Forks, and other smaller communities such as Joyce and Clallam Bay.

Both patterns, cross-county and intra-county trips, show the need for long distance transit connections and the role and importance of the Clallam Transit System in providing service across the county and between its urban centers and communities.

Two important considerations that arise from these findings are the importance of timing connections between long distance routes at each of the three transit centers that are operated by CTS, but in particular making sure that inter-city routes have their scheduled times synchronized at the Gateway Transit Center to allow for efficient and convenient travel across the county on Routes 14 – Forks and Route 30 – Hwy 10 Commuter.

Additionally, the commute patterns in Port Angeles suggest that there is a need for crosstown trips from the westside of Port Angeles to East Port Angeles.

Changing Travel Patterns

Other important considerations for the design of transit services are that many residents of the county are currently not in the labor force and use transit for non-work purposes (such as shopping, social recreation, personal business, and medical needs), and those that are in the labor force are not necessarily making trips at traditional commute times (from 8:00 a.m. to 5:00 p.m.).

Changes in the economy, moving many services to the cloud, online shopping and mobile phone applications, have impacted the geographic location of jobs and daily work schedules. These changes have been more pronounced in the last 10 years, since the great recession of 2009, and are being accelerated with the response to the COVID-19 pandemic.

Traditional commute trips (8:00 a.m. – 5:00 p.m.) are declining in the share of overall jobs and will continue declining, while off-peak, early morning and late evening trips will continue growing, especially for work trips related to the service and retail sectors. People working in specialized care, warehousing and distribution, retail and service jobs, work early and late shifts and also weekend shifts, at times when most transit system are not in operation.

CTS will need to extend its service hours during the week and the weekend, to provide current, former and prospective riders with a service that meets their commute trips.

3. Community Engagement

3. Community Engagement

In preparation of this COA, Clallam Transit System conducted multiple outreach activities to obtain feedback from current riders, former riders, stakeholders, and other members of the community, on their use of the system and how to improve the transit system to meet their needs. The main activities conducted during the community engagement phase were a community wide survey, a project advisory committee and discussions with stakeholders.

Community Survey

Due to the COVID-19 pandemic, CTS conducted an online community survey that was designed to capture feedback from current and former riders of CTS services. The survey ran for five weeks, from January 15th to February 21st of 2021. CTS collected a total of 806 valid responses, of which:

- 500 respondents were current CTS riders (62%)
- 150 respondents were former CTS riders (19%), and
- 150 respondents have never used CTS services (19%)

CLALLAM TRANSIT
Clallam Transit System Comprehensive Operational Analysis:
Creating an Adaptable Transit Future
Join the conversation on the future of transit in Clallam County.
VISIT OUR SITE
You can:
Learn more about the project
Take quick polls, share ideas, and map out new routes & stops
See where we're at in the process
Say what's on your mind
Interact with others in the community
Read past transit plans
SCAN ME
Ask questions and talk to project leaders
TAKE THE SURVEY
We want to:
Make it easier and quicker for people to get around with CTS
Come up with new ways to provide great service that is still affordable
Grow our services in a sustainable way.
CLALLAM TRANSIT SYSTEM
$25 Gift Card
Complete the survey and get qualified to win a $25 gift card!
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Although the survey was designed to be taken online, a few social organizations requested paper copies of the service to hand out to their clients. A total of 31 paper surveys were received and entered into the online system. The survey was advertised and promoted through:

- Clallam Transit's email distribution list which includes tribes, social organizations, and planning organizations in the county,
- Clallam Transit's website
- Local radio ads and an interview with CTS's General Manager,
- Local newspaper ads,
- Press releases, and
- Social media – through CTS's Facebook and Twitter accounts

The survey was effective at capturing responses from a cross-section of the county's population, including different age groups and income groups, as well as residents of urban and rural areas. It was also effective at capturing feedback from interested groups such as social organizations, seniors, persons of low income that rely on Clallam Transit for their daily mobility needs, and residents, except for Peninsula College students and high school students who were not attending classes in-person at the time of the survey.

Key Findings

A detailed survey response report was prepared and delivered to CTS on February 26, 2021. A summary of key findings and feedback is included below:

- Access to Vehicles: Most survey respondents indicated that have a drivers' license (84%), however only two-thirds (66%) have access to their own vehicle or share a vehicle (11%). Close to one in five respondents (19%) did not have access to a vehicle.
- Destination and Purpose of Travel: Port Angeles and Sequim are the main destinations for all trips, and especially for those that are related to work, school, grocery shopping, healthcare and shelter. Trips to Joyce, Elwha, Neah Bay, Clallam Bay, Forks and Beaver are more common for social and family engagements, and for recreational purposes. See Figure 17 below for more details.
- Non-Riders: those that have not used any CTS service said, in their reasons not to ride, that did not know enough about the service, the nearest bus stop is far from where they live, the service does not go where they need to go, and is not available at the times they need it. In other words, they cited lack of geographic coverage and time of day coverage of the service.
- Former Riders: those that stopped riding cited as their reasons, in addition to COVID-19, that the service was not frequent enough, did not go where they needed to go, and that the trip would take too long. That is, they mentioned mostly convenience of service factors.
- Current Riders: three-quarters of users (75%) have been riding CTS for more than a year – and throughout the pandemic, with over one-third of them (36%) riding for more than five years. This indicates that many riders are dependent on the service to move around the county.
- Frequency of Use: most users indicate that they ride CTS services less than once a week, with about one in five (20%) saying that ride the service very rarely or infrequently. In contrast, about one in five users (18%) declare riding CTS services five days per week or very frequently. About 45% of users ride the service two or more days per week. This shows that existing riders could use CTS services more if the service is more convenient.
- Service Accessibility: only one third of users (33%) reported walking to the nearest bus stop less than five minutes, close to one third (29%) reported walking for up to 15 minutes, and about one in ten users (9%) declared walking for up to 30 minutes. Many users appear to be riding long distances to access the nearest bus stop, with over one in four users (28%) riding a bicycle, getting a ride, or driving their own vehicle and parking.
- Service Availability: most riders (85%) have other options to travel if CTS was not available. More than one-half of users will drive their own vehicle or get a ride from someone else. About one-quarter of users would walk or ride a bike. This shows that most users have chosen to use CTS but have other options.
- Satisfaction with Service: Most users (87%) are happy or very happy with CTS service. They declared high levels of satisfaction with drivers' courtesy, vehicles comfort and cleanliness, and the fare. They indicated a lower level of satisfaction with the hours and frequency of service.
- Mobile Ticketing: only about one-quarter of survey respondents (27%) use the Token Transit mobile payment and ticketing application. Most respondents (60%) have never heard of Token Transit. More work is needed promoting and educating current and potential users about this convenient tool.

Figure 17: Where do you travel for the following purposes?

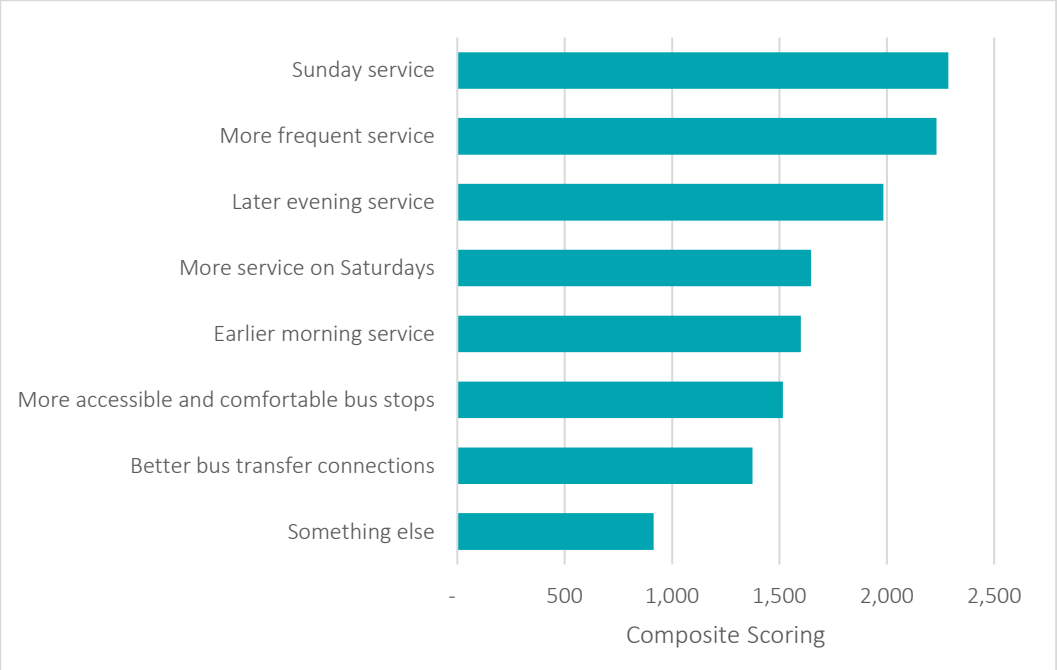
Source: CTS Community Survey, January – February of 2021

- **Trip Planning and Real-Time Arrival Information**: similarly, about one-quarter of survey respondents (26%) have used the UniteGPS mobile site to plan their trip and know when the next bus is coming. Most respondents (61%) have never heard of UniteGPS. More work is needed promoting and educating current and potential users about this convenient tool.
- **Sources of Information**: Most respondents get their information about activities in the community through social media and online, using smartphones and computers. Many also get information from family and friends, and some from newsletters and emails.
- **Age and Gender**: over one-half of respondents were female (54%), and about three-quarters of respondents were adults 25 – 64 years of age (73%)
- **Employment**: most respondents (57%) were employed full-time (40%) or self-employed or employed part-time (17%). Over one in five are retired (22%), and only 6 percent declared to be unemployed.
- **Income**: About one-third of respondents (30%) declared an annual household income below $30,000, which approximates the poverty threshold for a family of four. About 60% of respondents reported an income of $60,000 or less and are low income or poor.

Service Improvements

Survey respondents were asked about the top three improvements that they would make to CTS service, their preferences were ranked as follows:

Figure 18: Selected Service Improvements Ranking



Source: Walker Consultants 2021

Sunday service got the top ranking, followed by more frequent service and later evening service. The ranking of service improvement preferences supports the market analysis findings and demographics of survey respondents.

CTS riders use the service mostly for non-work trips during the midday, afternoon, and evening. These trips extend into the weekend, highlighting the importance of Saturday service and desire for Sunday service.

Survey participants were also asked to list three locations in Clallam County that they would like to see served by CTS, their top preferences not ranked by priority, were the following:

- Hurricane Ridge
- Dungeness Wildlife Refuge
- Salt Creek Recreation Area
- Sol Duc Hot Springs
- Rialto Beach
- Old Olympic Highway and Carlsborg area
- Mt. Pleasant, Monroe, and Mt. Angeles Roads
- Port Angeles Walmart
- Diamond Point and 7 Cedars Casino on weekends
- Port Townsend and Silverdale, outside the county, and
- Direct connections to Peninsula College and the Olympic Medical Center hospital

Summary of Comments

Finally, survey respondents were invited to submit additional comments about Clallam Transit services. There were 341 comments. A high-level summary of them is provided below:

- Many respondents liked the transit service, said that Clallam Transit is doing a great job, and they would not suggest any changes at this time.
- Many former riders said they will use the service again, once the pandemic is over.
- Many respondents particularly value the Strait Shot service to the Bainbridge Island Ferry Terminal.
- Some people wished the Strait Shot service was faster, had more convenient times, and transit stops.
- Some respondents would like CTS services to run for more extended hours, including earlier in the morning and later in the evening.
- Many respondents re-iterated their desire for Sunday service.
- Some would consider using the transit service in combination with bicycling, and others would like to see more bicycle capacity on the transit vehicles.
- Many respondents want direct bus service to recreational destinations, parks, and trailheads, but especially to Hurricane Ridge.
- Some suggested the use of electric buses, particularly for shorter routes.
- Others want more covered bus stops to wait for service during inclement weather.
- Some want reduced or free transit fare for low-income individuals.
- A few respondents wanted bus drivers to receive more training to de-escalate tension resulting from confrontational or unruly passengers on transit buses, which has occurred more frequently during the pandemic.
- However, many respondents reported satisfaction with their experience with bus drivers.

Stakeholders Meetings

Project Advisory Committee

To complement the quantitative feedback of the community survey, CTS also invited a group of stakeholders that are representative of the community to participate in a Project Advisory Committee (PAC). PAC members included representatives from the cities of Forks and Sequim, chambers of commerce, Quileute, Makah, Elwha and Jamestown tribes, trails and hiking organizations, Olympic National Park, Coho Ferry, social organizations, and healthcare and behavioral health organizations (Olympic Healthcare Network and Peninsula Behavioral Health).

The PAC met three times during the course of the study, to learn about the study goals and participate in a visioning session (January 27, 2021), to learn about unmet needs and establish priorities for service (March 10, 2021), and to discuss service change recommendations (June 29, 2021):

Visioning

On the first meeting, PAC members were invited to participate in a Mural[2] exercise to develop a vision of success for the project, identify fears and potential obstacles. Figure 19 below shows the results of the Mural exercise. The main themes are summarized in the paragraphs below.

What does project success look like?

- A continued positive reputation in the community
- Be the first option for transportation in Clallam County
- Conversion of personal vehicle users with more service options
- Increased ridership and options to move around
- Increased outreach and education to residents, and partnerships with other systems
- Better connectivity across the Olympic Peninsula and more trips to the Bainbridge Island Ferry

Perceived obstacles and fears for the project include:

- Not reaching vulnerable populations
- Not representing the needs of the entire community
- Ensuring user-friendliness of the system and accommodating people with special needs
- Creating a system that is too attractive to tourists and gets overwhelming
- Not being able to carry bikes because of increases in ridership
- Not result in the ability to make changes

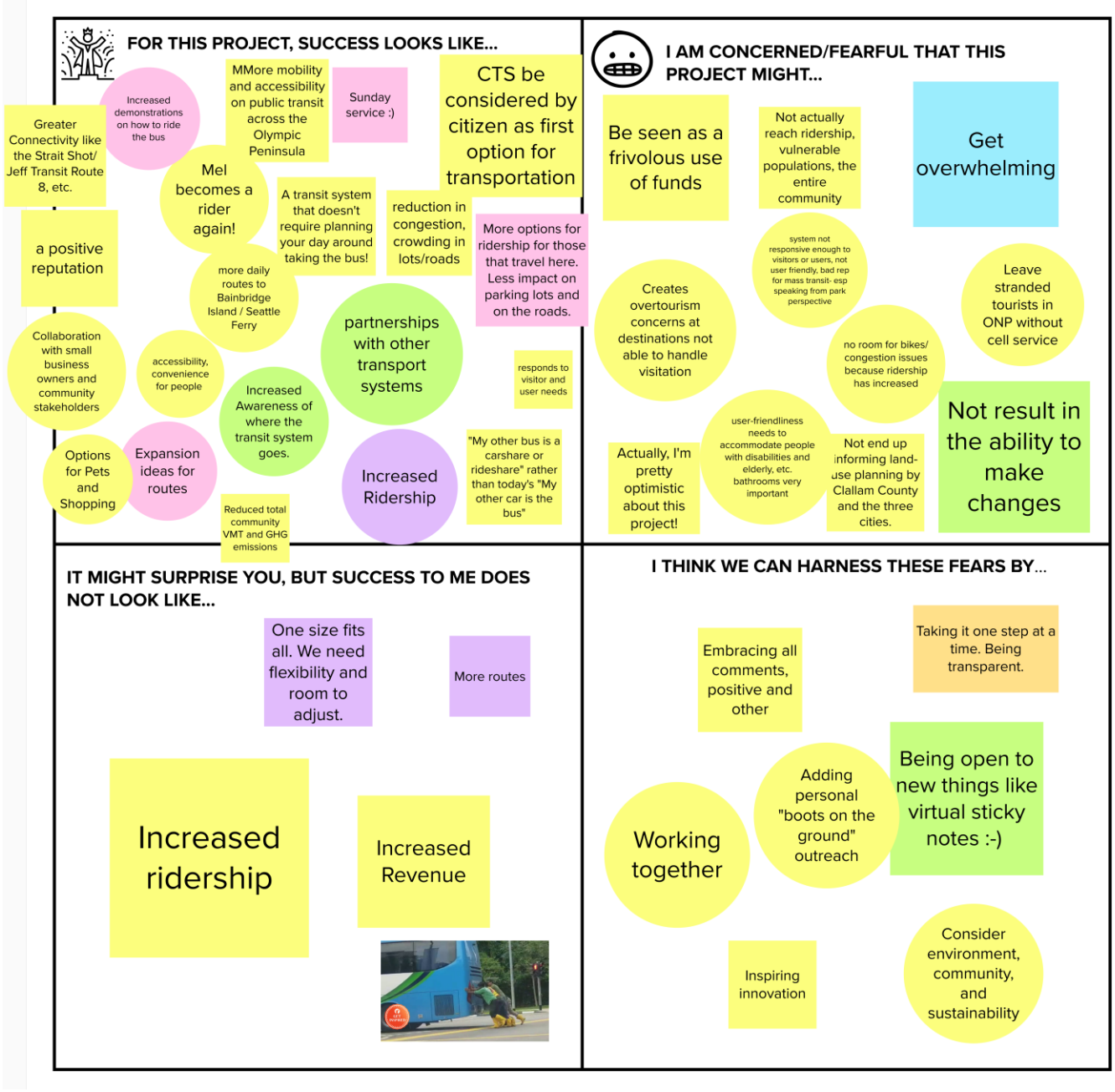
Some ways to harness these fears and move forward included:

- Taking one step at a time, grow incrementally
- Working together with all organizations in the community

[2] www.mural.co. Digital workspace for visual collaboration.

- Being open to opportunities and innovation
- Embracing environmental sustainability

Figure 19: Project Success and Fear Statement


FOR THIS PROJECT, SUCCESS LOOKS LIKE...
Increased demonstrations on how to ride the bus
MMore mobility and accessibility on public transit across the Olympic Peninsula
Sunday service :)
CTS be considered by citizen as first option for transportation
Greater Connectivity like the Strait Shot/ Jeff Transit Route 8, etc.
Mel becomes a rider again!
A transit system that doesn't require planning your day around taking the bus!
reduction in congestion, crowding in lots/roads
More options for ridership for those that travel here. Less impact on parking lots and on the roads.
a positive reputation
more daily routes to Bainbridge Island / Seattle Ferry
partnerships with other transport systems
Collaboration with small business owners and community stakeholders
accessibility, convenience for people
responds to visitor and user needs
Increased Awareness of where the transit system goes.
Options for Pets and Shopping
Expansion ideas for routes
Increased Ridership
"My other bus is a carshare or rideshare" rather than today's "My other car is the bus"
Reduced total community VMT and GHG emissions
I AM CONCERNED/FEARFUL THAT THIS PROJECT MIGHT...
Be seen as a frivolous use of funds
Not actually reach ridership, vulnerable populations, the entire community
Get overwhelming
system not responsive enough to visitors or users, not user friendly, bad rep for mass transit- esp speaking from park perspective
Creates overtourism concerns at destinations not able to handle visitation
Leave stranded tourists in ONP without cell service
no room for bikes/ congestion issues because ridership has increased
Not result in the ability to make changes
user-friendliness needs to accommodate people with disabilities and elderly, etc. bathrooms very important
Actually, I'm pretty optimistic about this project!
Not end up informing land-use planning by Clallam County and the three cities.
IT MIGHT SURPRISE YOU, BUT SUCCESS TO ME DOES NOT LOOK LIKE...
One size fits all. We need flexibility and room to adjust.
More routes
Increased ridership
Increased Revenue
I THINK WE CAN HARNESS THESE FEARS BY...
Embracing all comments, positive and other
Taking it one step at a time. Being transparent.
Being open to new things like virtual sticky notes :-)
Adding personal "boots on the ground" outreach
Working together
Consider environment, community, and sustainability
Inspiring innovation

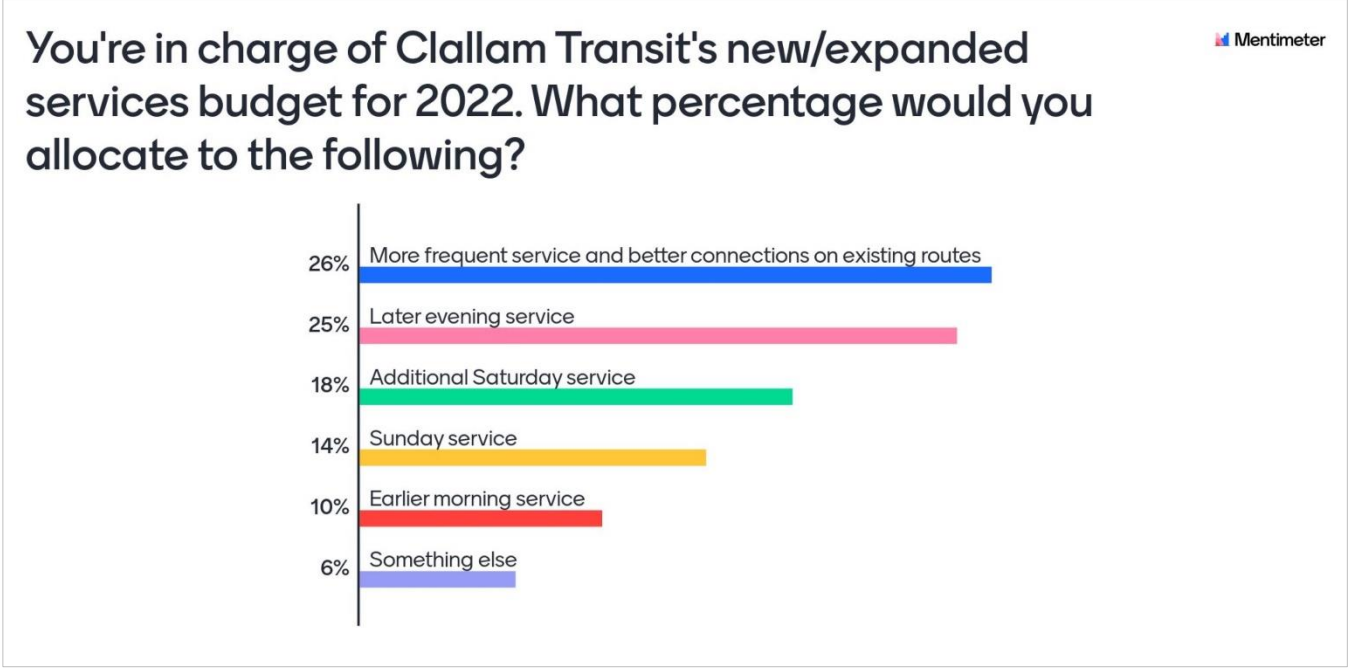
Source: Walker Consultants 2021

Service Priorities

On the second meeting, PAC members were presented with results of the community survey, market analysis and unmet transit needs in the region. They were invited to provide feedback through a guided trade-offs discussion, using the Mentimeter[3] platform.

PAC members were presented with the community's preferences for service improvements. They were asked to allocate budget for new and expanded services based on their knowledge of the community and the survey results. The results of this exercise are shown in Figure 20 below.

Figure 20: Preferred Budget Allocation to Fund New and Expanded Services



Source: Walker Consultants 2021

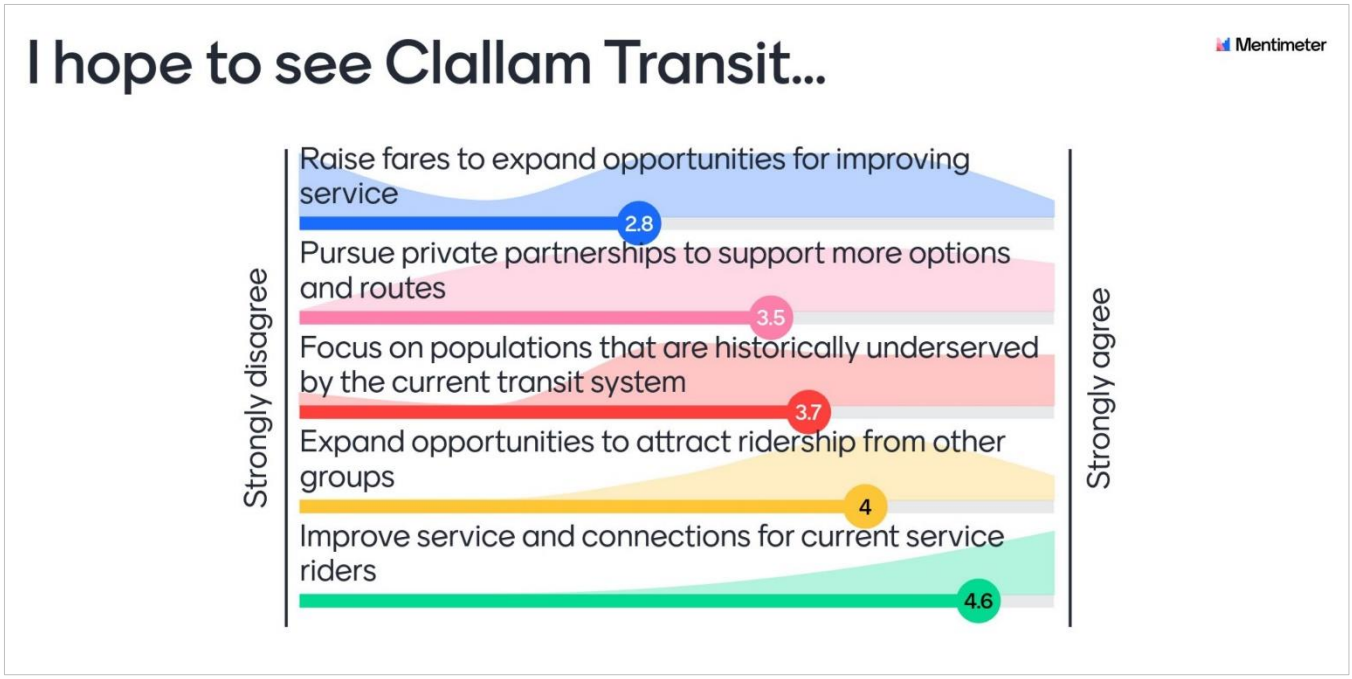
PAC members thought that the most important priorities were to improve existing headways, provide better connections to travel across the region, and provide later evening service as the top priorities, capturing over 50 percent of the budget.

In relation to the future of Clallam Transit, PAC members were asked to score five key initiatives to increase service attractiveness, use and financial sustainability of service. The results of this exercise are shown in Figure 21 below, from lowest to highest score, or least critical to most critical.

PAC members saw improving service and connections for existing riders as the most important initiative, followed by expanding opportunities to attract ridership from groups other than current riders, and focusing on populations that are historically underserved, which many PAC members stated CTS does well now.

[3] www.mentimeter.com. Interactive presentation software.

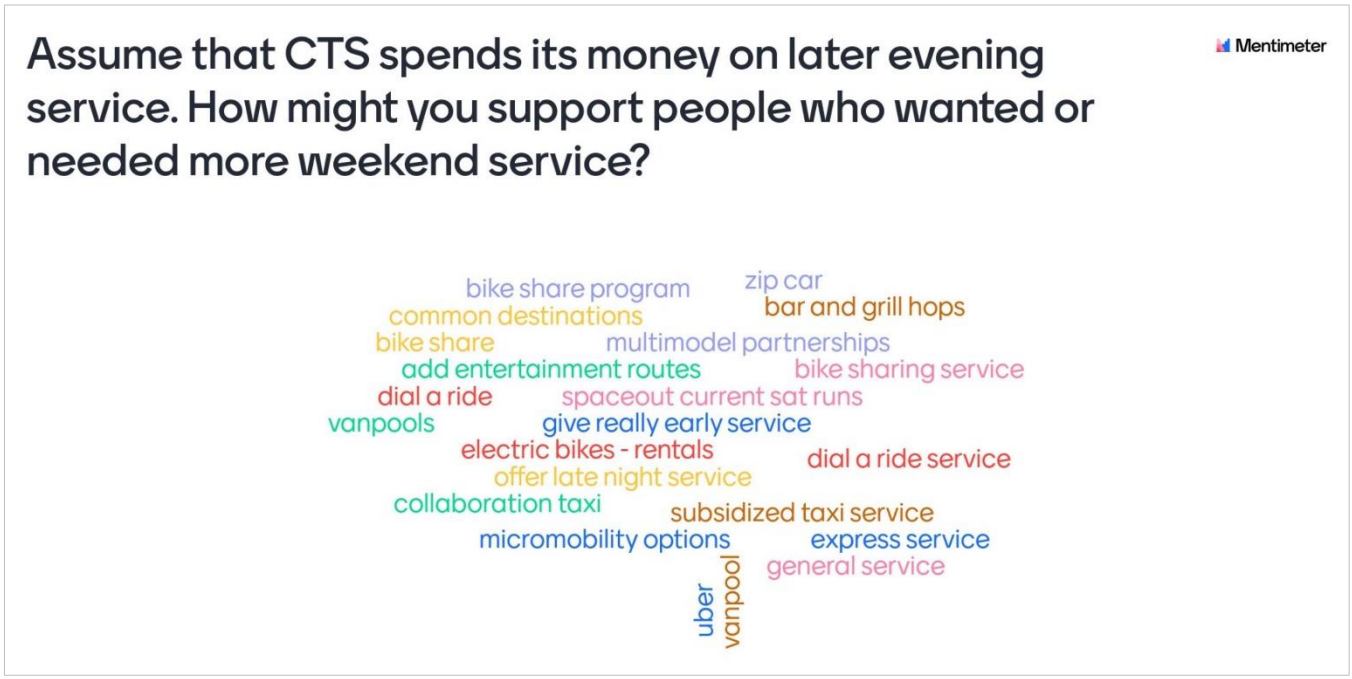
Figure 21: Strategies to pursue the Future of Clallam Transit


I hope to see Clallam Transit...
Mentimeter
Strongly disagree
Strongly agree
Raise fares to expand opportunities for improving service
2.8
Pursue private partnerships to support more options and routes
3.5
Focus on populations that are historically underserved by the current transit system
3.7
Expand opportunities to attract ridership from other groups
4
Improve service and connections for current service riders
4.6

Source: Walker Consultants 2021

Understanding that the community's desires and preferences and unmet needs are much greater than available funding, PAC members were asked to elaborate on two trade-off questions, how to support people that wanted more Saturday and new Sunday service, and how to support those that wanted new service to Hurricane Ridge. Their input and ideas are summarized in the figures below.

Figure 22: Late Evening versus Weekend Service

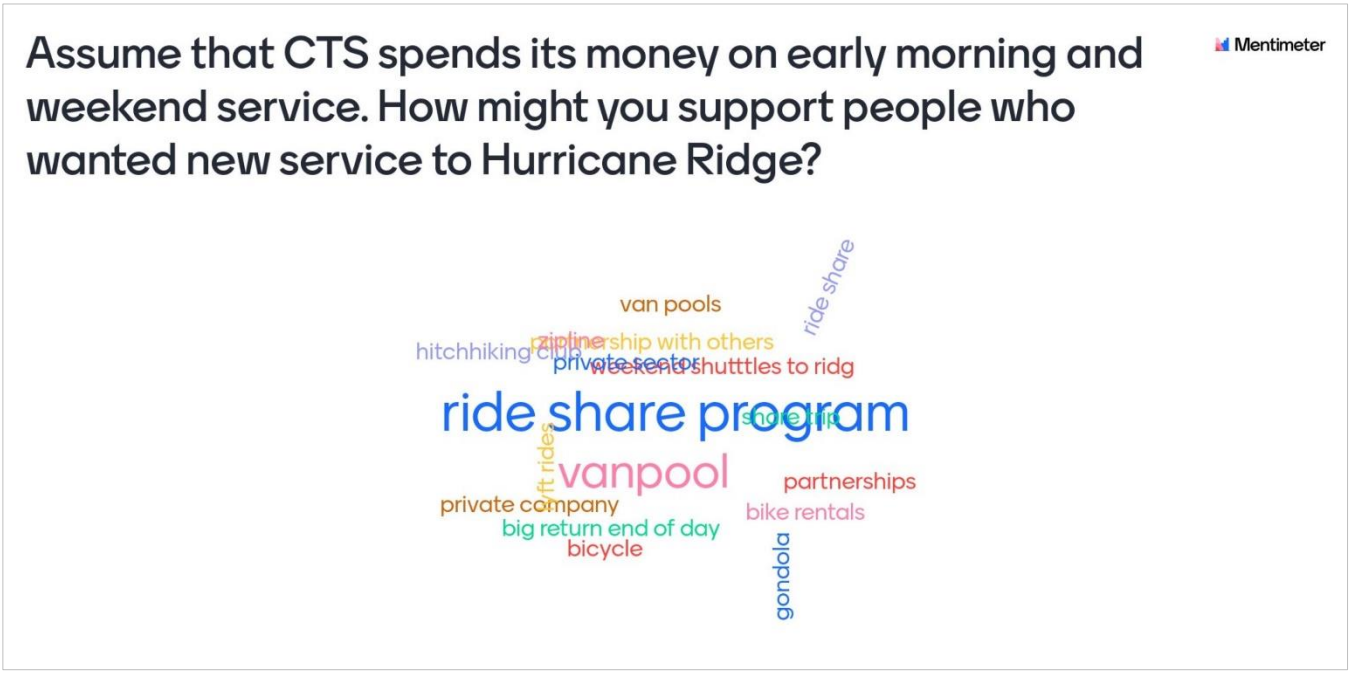


Source: Walker Consultants 2021

Generally, the PAC thought about increasing the use of vanpools and other shared-mobility services such as car sharing, electric bike sharing, scooter sharing, Uber, and dial-a-ride and microtransit services to expand the offering on weekend days and at times when CTS is not in service.

Similarly, for the Hurricane Ridge service the thought was to develop partnerships with other organizations, allow private operators to take on the service, or implement a ridesharing program.

Figure 23: Early Morning versus Hurricane Ridge Service

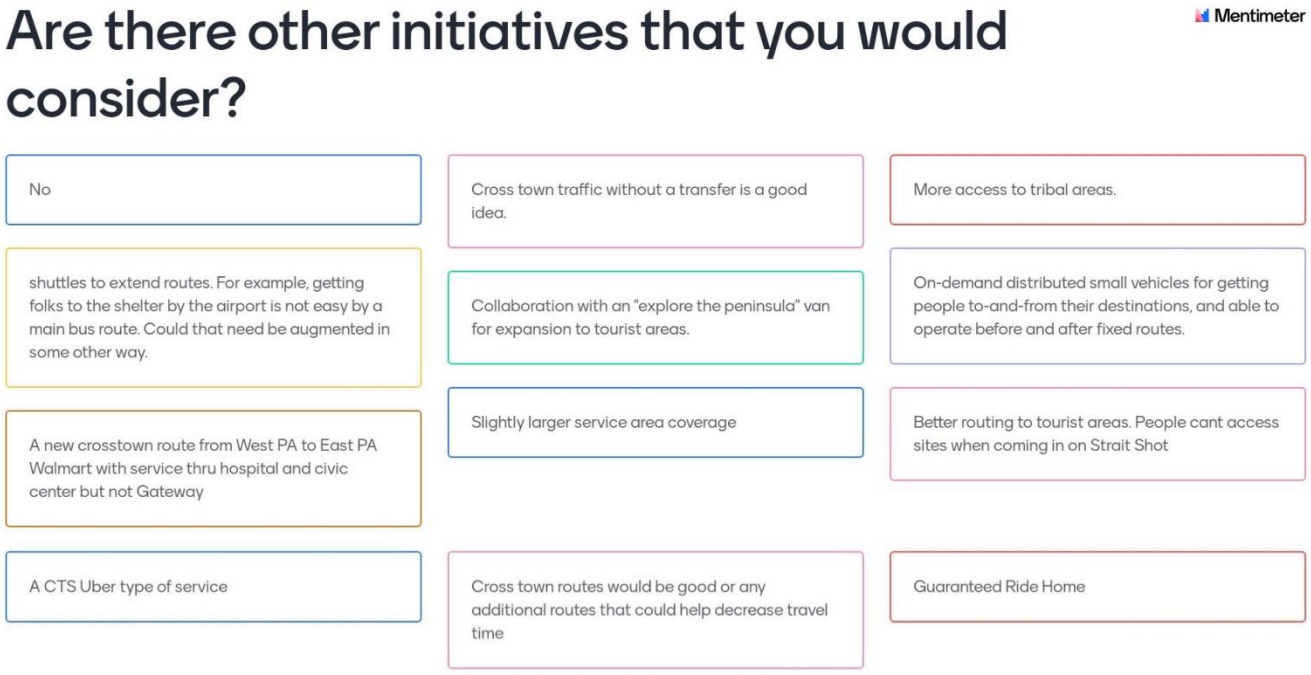


Source: Walker Consultants 2021

In relation to other service issues and initiatives, the PAC provided a number of service ideas to expand access to major tourist destinations and connections across town and across the region, including:

- Develop shuttle solutions to provide service to off-route deviations such as Serenity House, Melody Lane, and Lower Elwha,
- Implementing an Uber type service or microtransit service to provide service trips on demand, sharing rides with others,
- Increased amenities at bus stop locations, like weather protection, restrooms, and electrical outlets,
- Showcasing local artists works on transit facilities such as bus stops and transit centers, to promote identify and local economy,
- Partnering with the private sector for expanded/new service in certain locations, such as Hurricane Ridge, Rialto Beach, Salt Creek, and other parks and trails around the peninsula,
- Expanding access to tribal areas,
- Expanded marketing and promotion of service,
- Implementing cross-town services in Port Angeles, without transfers at Gateway, to connect West Port Angeles with East Port Angeles and the East PA Walmart, and
- Implementing a Guaranteed Ride Home program to support transit and ridesharing options.

Figure 24: Other Initiatives for Consideration


Are there other initiatives that you would consider?
Mentimeter
No
Cross town traffic without a transfer is a good idea.
More access to tribal areas.
shuttles to extend routes. For example, getting folks to the shelter by the airport is not easy by a main bus route. Could that need be augmented in some other way.
Collaboration with an "explore the peninsula" van for expansion to tourist areas.
On-demand distributed small vehicles for getting people to-and-from their destinations, and able to operate before and after fixed routes.
Slightly larger service area coverage
Better routing to tourist areas. People cant access sites when coming in on Strait Shot
A new crosstown route from West PA to East PA Walmart with service thru hospital and civic center but not Gateway
A CTS Uber type of service
Cross town routes would be good or any additional routes that could help decrease travel time
Guaranteed Ride Home

Source: Walker Consultants 2021

Fixed-Route Drivers

We spoke with drivers and dispatchers during the week of February 6, 2021 (ridecheck week), and also provided "office hours" on February 19, 2021 (at the drivers' break room in the Gateway Transit Center) to learn more details about the service and its riders, from their experience driving the routes and operating the service. Key input/highlights that we heard are summarized below:

- Clallam Transit drivers love to drive the system routes. They like the variety of routes and that work assignments do not have them driving the same route all day.
- The homeless situation in Port Angeles during COVID-19 has been difficult, drivers have experienced it every day on their buses and transit centers.
- Homeless individuals going to and from the Serenity House at the end of Route 26 – Westside, has had a major impact on the route's ridership.
- Having a route making crosstown connections to East Port Angeles Walmart or the Port Angeles Safeway would be great. Many people make transfer connections at Gateway just to go to Safeway.
- The current stop [on Hwy 101] outside the East Port Angeles Walmart does not provide a safe and convenient access to people.
- Crosstown connections would be good for people going to the Olympic Medical Center and the Lower Elwha Wellness Center (on Olympic Highway).
- Areas that currently do not get any service and have many residents include Mt. Angeles, Porter Hill and Black Diamond neighborhoods in Port Angeles, and Deer Park, Township and Blue Mountain in East Port Angeles.

- Other residential areas that do not get any service include the Old Olympic Highway in Carlsborg, and River Road and Bell Hill in Sequim.
- Most route operational comments were dedicated to urban routes in Port Angeles. Drivers would like to see alignment changes to routes 17, 20, 22, 24, 26, 40 and 52.
- Route 17 – Forks Shuttle
    - There is very little ridership, the route has too many turns, and it is very confusing to riders.
- Route 20 – College / Medical Center
    - The deviation to Melody Lane makes the route very long
- Route 22 – Lincoln / Peabody
    - Right turns from Peabody to Whidby, and left turns from Whidby to Eunice or Whidby to Francis are very tight. There are too many cars on Eunice by the housing project, the street is too narrow, and they would like to stay away from it.
    - Ideally go straight down on Peabody to Lauridsen to serve the library, but the right turn onto Lauridsen is no longer possible with the redesign [of Lauridsen].
    - The loop around the library was recently eliminated and the route no longer serves the library, it goes right from Lauridsen to Peabody.
    - It would be great to design a route that can serve SARS, Safeway, and the library.
- Route 24 – Cherry Hill
    - Route 24 has some right turns that are tight, drivers must swing left and encroach into oncoming lanes to complete the turn.
    - Perhaps use a 35-foot bus on this route and not a 40-foot bus.
- Route 26 – West Side
    - Separate the deviation to Lower Elwha from this route. Send the bus to Lower Elwha via Olympic Highway to serve the Lower Elwha Clinic [Wellness Center].
- Route 40 – Sequim Shuttle
    - Sequim does not have enough service on weekdays. The route stops too early, and it does not have service on Saturday.
    - The bus is a small bus that looks like a paratransit bus. It does not have visibility.
- Route 52 – Sequim to Diamon Point
    - The intersection of West Sequim Bay Rd and Hwy 101 is dangerous, drivers have to start from a complete stop [there is a stop sign] and turn left against traffic, on an angle approach, with bad visibility of eastbound traffic.
    - Re-route and do not serve this intersection or serve West Sequim Bay Rd on the westbound direction only.

City and County Planners

Finally, we met with city and county planning staff to learn about growth and development plans for the major urban areas in the county. There is not much development expected in the next five years. The county is growing slowly. Most of the growth is in Sequim with development of new residential communities for retirees.

The City of Port Angeles has been working on re-designing some of its major streets – Lincoln and Race, to make them multi-modal, including bike lanes and safer pedestrian crossings. They have included existing bus stops in their designs, but not considered changes in the operation of CTS services like operating on Race bi-directionally and/or additional stop locations.

4. Route by Route Profiles

4. Route by Route Profiles

Route 10 – Joyce

Service Characteristics

- Route length = 24 miles
- Route variants:
  - Gateway Transit Center to Lyre River Rd.
  - Gateway Transit Center to Joyce
  - Gateway TC to Joyce/Lyre River, with deviation to serve N S'Klallam Drive
- Service hours:
  - 6:13 a.m. – 8:58 p.m. weekday
  - 8:34 a.m. – 7:43 p.m. Saturday
- Frequency:
  - 6 trips per direction, weekday
  - 4 trips per direction, Saturday

Ridership Activity

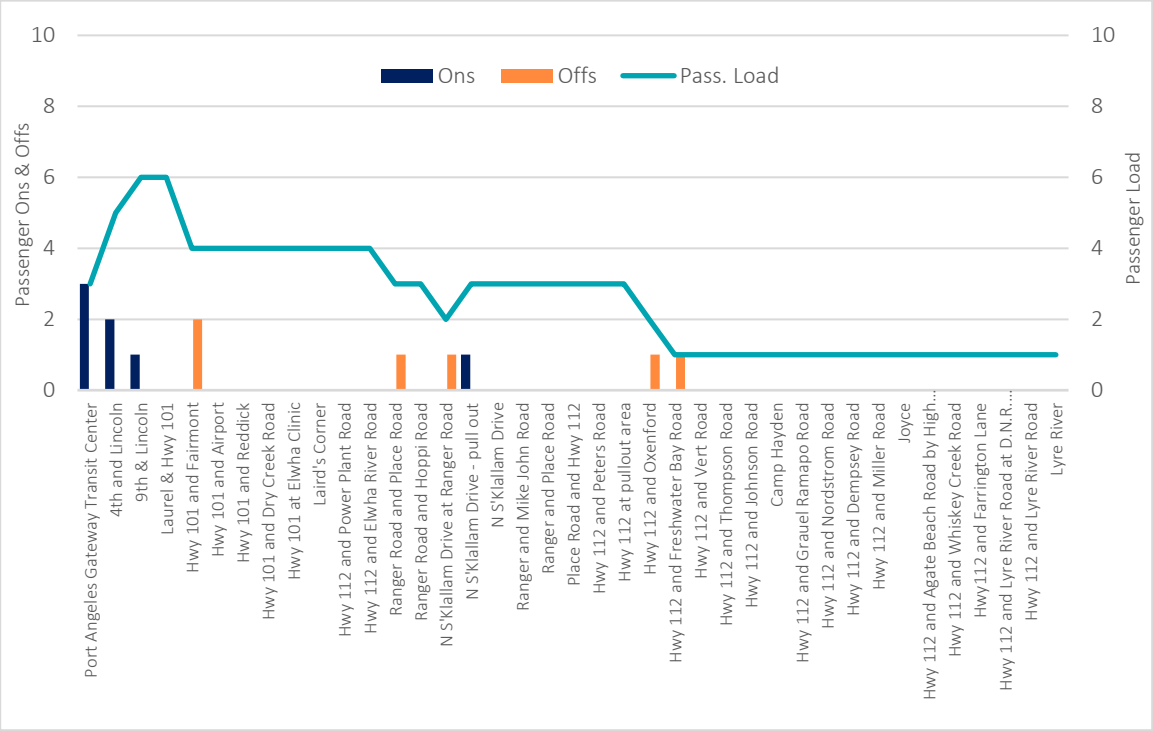
Figure 25: Route 10 – Weekday Ons and Offs Activity per Stop

Note: The circle representing the daily "ons" and "offs" in the legend is a proportional symbol. It's size on the map represents the passenger activity volume at each stop, both daily ons and offs per stop, and the size of the symbol in the legend provides a reference only. For example, the number "8" next to the circle indicates that there are 8 ons/offs, or 4 ons and 4 offs. For stops with more than 8 ons/offs, the circle will appear larger. For stops with less than 8 ons/offs, the circle will appear smaller.

Source: Walker Consultants 2021

Passenger Load Profile

Figure 26: Westbound – from Gateway Transit Center to Joyce/Lyre River


Ons
Offs
Pass. Load
Passenger Ons & Offs
Passenger Load
0
2
4
6
8
10
Port Angeles Gateway Transit Center
4th and Lincoln
9th & Lincoln
Laurel & Hwy 101
Hwy 101 and Fairmont
Hwy 101 and Airport
Hwy 101 and Reddick
Hwy 101 and Dry Creek Road
Hwy 101 at Elwha Clinic
Laird's Corner
Hwy 112 and Power Plant Road
Hwy 112 and Elwha River Road
Ranger Road and Place Road
Ranger Road and Hoppi Road
N S'Klallam Drive at Ranger Road
N S'Klallam Drive - pull out
N S'Klallam Drive
Ranger and Mike John Road
Ranger and Place Road
Place Road and Hwy 112
Hwy 112 and Peters Road
Hwy 112 at pullout area
Hwy 112 and Oxenford
Hwy 112 and Freshwater Bay Road
Hwy 112 and Vert Road
Hwy 112 and Thompson Road
Hwy 112 and Johnson Road
Camp Hayden
Hwy 112 and Graul Ramapo Road
Hwy 112 and Nordstrom Road
Hwy 112 and Dempsey Road
Hwy 112 and Miller Road
Joyce
Hwy 112 and Agate Beach Road by High...
Hwy 112 and Whiskey Creek Road
Hwy112 and Farrington Lane
Hwy 112 and Lyre River Road at D.N.R....
Hwy 112 and Lyre River Road
Lyre River

Source: Walker Consultants 2021

Figure 27: Eastbound – from Lyre River/Joyce to Port Angeles/Gateway Transit Center

Source: Walker Consultants 2021

Service Performance

- Productivity Indicators (2019)
  - Weekday boardings = 63
  - Passengers per hour = 7.4
  - Passengers per trip = 5.3
  - Average trip length (miles) = 12.0
- Efficiency Indicators (2019)
  - Cost per Boarding = $24.8
  - Cost per Passenger Mile = $2.1
  - Revenue per Passenger Mile = $0.08
  - Farebox Recovery Ratio = 4.0%
- Service Trips On-Time Performance (February 2021)
  - Early (< 0 mins.) = 41.7%
  - On-time (0 to 5 mins.) = 50.0%
  - Late (> 5 mins.) = 8.3%

Strengths and Opportunities for Improvement

Key Service Design Issues

- Vehicle trips every 2-3 hours,
- End to end trips of 25, 33 and 39 minutes long, depending on route variant,
- Passengers traveling between Gateway – Hwy 101, Gateway – NS' Klallam Drive, Joyce and Lyre River, and between Lyre River and Hwy 101.

Service Change Recommendations

- NS' Klallam deviation takes about the same time as going from Joyce to Lyre River. Explore serving this deviation to NS' Klallam with a different route.
- More trips could be provided to Lyre River if the NS' Klallam deviation was served by another route.
- Highway 101 needs hourly service between Laird's Corner and Gateway.
- Route 14 – Forks runs about every 2 hours on this segment.
- Many Route 10 and Route 14 trips run close to each other (within 5-15 minutes), and do not provide additional frequency along the segment.
- Explore staggering the trip times of Route 10 and Route 14 to provide hourly service along the Laird's Corner and Gateway segment.

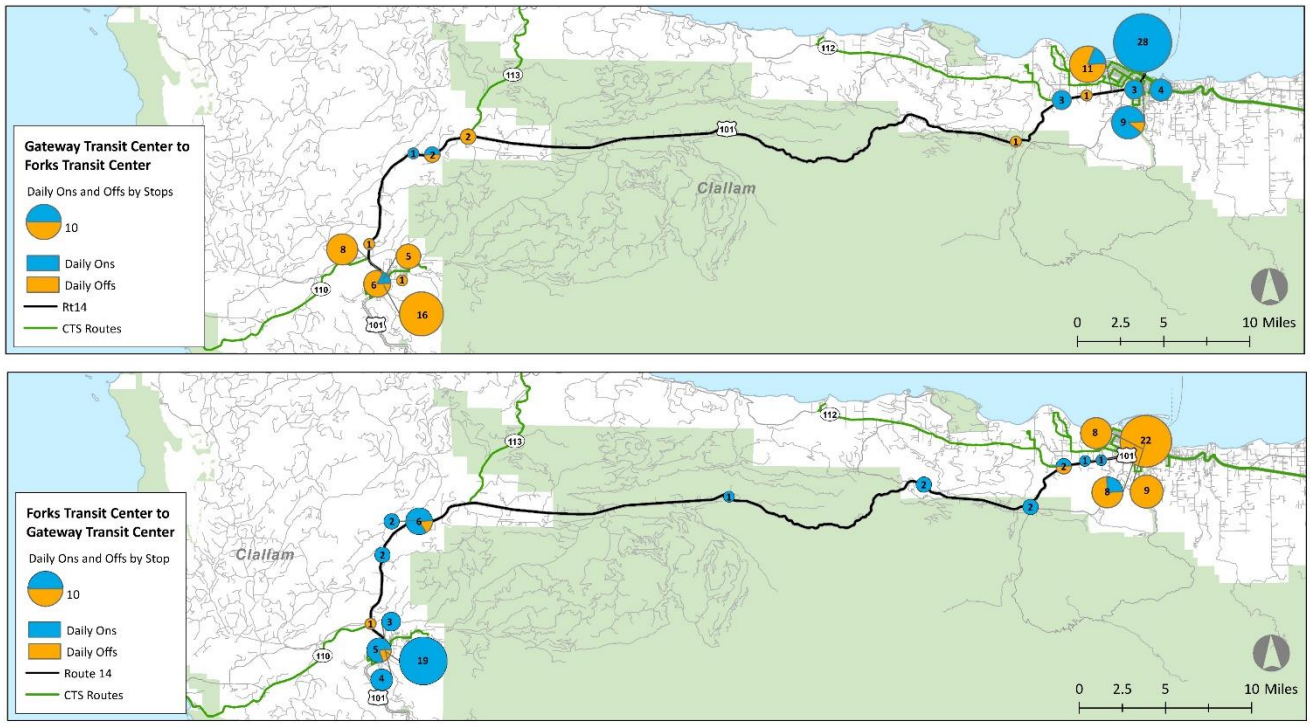
Route 14 – Forks

Service Characteristics

- Route length = 57 miles
- Route variants:
  - Gateway Transit Center to Forks Transit Center
  - Gateway Transit Center to Forks Transit Center via Forks Hospital
- Service hours:
  - 5:50 a.m. – 8:30 p.m. weekday
  - 7:00 a.m. – 8:05 p.m. Saturday
- Frequency:
  - 8 trips per direction, weekday
  - 4 trips per direction, Saturday

Ridership Activity

Figure 28: Route 14 – Weekday Ons and Offs Activity per Stop

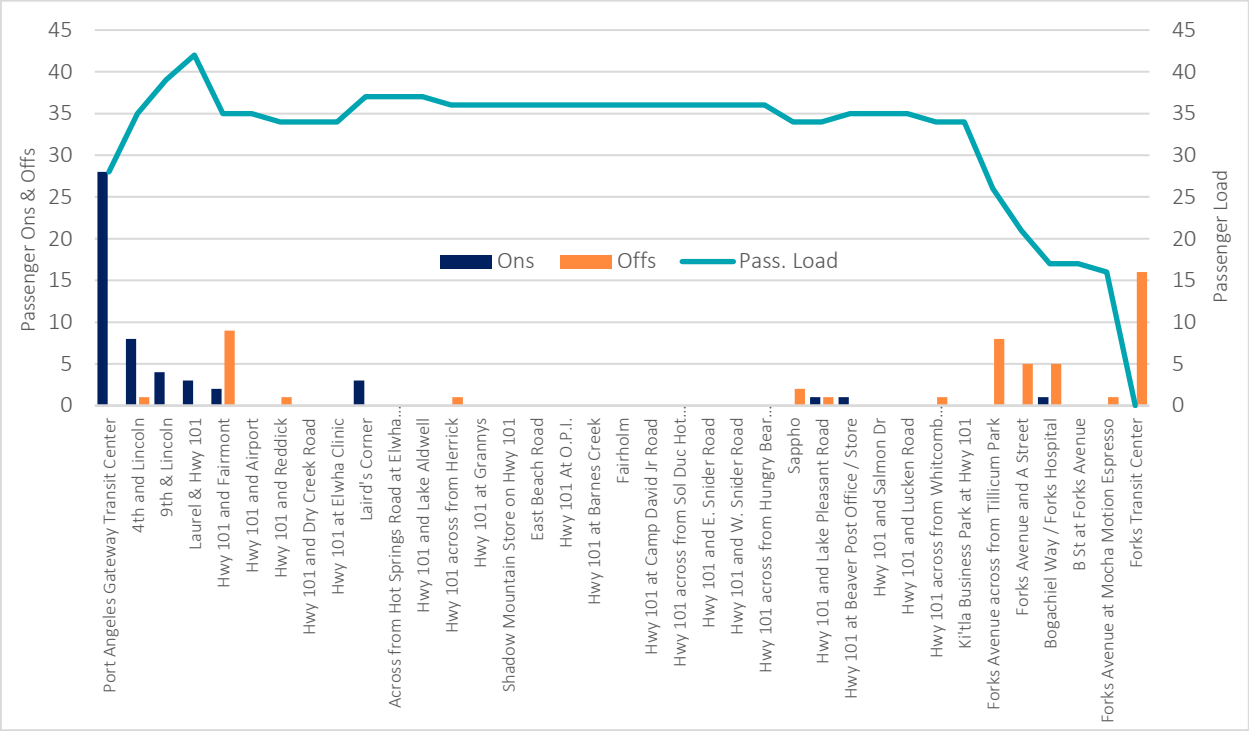


Note: The circle representing the daily "ons" and "offs" in the legend is a proportional symbol. It's size on the map represents the passenger activity volume at each stop, both daily ons and offs per stop, and the size of the symbol in the legend provides a reference only. For example, the number "10" next to the circle indicates that there are 10 ons/offs, or 5 ons and 5 offs. For stops with more than 10 ons/offs, the circle will appear larger. For stops with less than 10 ons/offs, the circle will appear smaller.

Source: Walker Consultants 2021

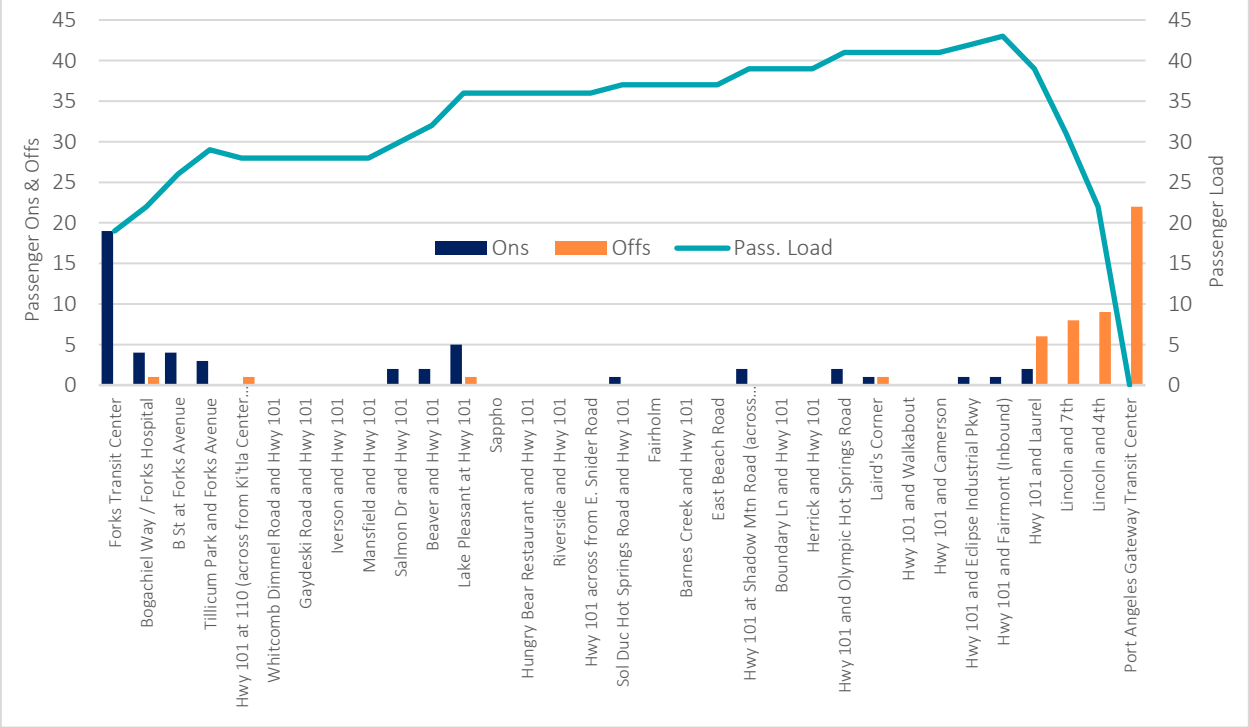
Passenger Load Profile

Figure 29: Westbound to Forks Transit Center


Passenger Ons & Offs
Passenger Load
Ons
Offs
Pass. Load
Port Angeles Gateway Transit Center
4th and Lincoln
9th & Lincoln
Laurel & Hwy 101
Hwy 101 and Fairmont
Hwy 101 and Airport
Hwy 101 and Reddick
Hwy 101 and Dry Creek Road
Hwy 101 at Elwha Clinic
Laird's Corner
Across from Hot Springs Road at Elwha...
Hwy 101 and Lake Aldwell
Hwy 101 across from Herrick
Hwy 101 at Grannys
Shadow Mountain Store on Hwy 101
East Beach Road
Hwy 101 At O.P.I.
Hwy 101 at Barnes Creek
Fairholm
Hwy 101 at Camp David Jr Road
Hwy 101 across from Sol Duc Hot...
Hwy 101 and E. Snider Road
Hwy 101 and W. Snider Road
Hwy 101 across from Hungry Bear...
Sappho
Hwy 101 and Lake Pleasant Road
Hwy 101 at Beaver Post Office / Store
Hwy 101 and Salmon Dr
Hwy 101 and Lucken Road
Hwy 101 across from Whitcomb...
Ki'tla Business Park at Hwy 101
Forks Avenue across from Tillicum Park
Forks Avenue and A Street
Bogachiel Way / Forks Hospital
B St at Forks Avenue
Forks Avenue at Mocha Motion Espresso
Forks Transit Center

Source: Walker Consultants 2021

Figure 30: Eastbound to Port Angeles/Gateway Transit Center


Passenger Ons & Offs
Passenger Load
Ons
Offs
Pass. Load
Forks Transit Center
Bogachiel Way / Forks Hospital
B St at Forks Avenue
Tillicum Park and Forks Avenue
Hwy 101 at 110 (across from Ki'tla Center...
Whitcomb Dimmel Road and Hwy 101
Gaydeski Road and Hwy 101
Iverson and Hwy 101
Mansfield and Hwy 101
Salmon Dr and Hwy 101
Beaver and Hwy 101
Lake Pleasant at Hwy 101
Sappho
Hungry Bear Restaurant and Hwy 101
Riverside and Hwy 101
Hwy 101 across from E. Snider Road
Sol Duc Hot Springs Road and Hwy 101
Fairholm
Barnes Creek and Hwy 101
East Beach Road
Hwy 101 at Shadow Mtn Road (across...
Boundary Ln and Hwy 101
Herrick and Hwy 101
Hwy 101 and Olympic Hot Springs Road
Laird's Corner
Hwy 101 and Walkabout
Hwy 101 and Camerson
Hwy 101 and Eclipse Industrial Pkwy
Hwy 101 and Fairmont (Inbound)
Hwy 101 and Laurel
Lincoln and 7th
Lincoln and 4th
Port Angeles Gateway Transit Center

Source: Walker Consultants 2021

Service Performance

- Productivity Indicators (2019)
  - Weekday boardings = 170
  - Passengers per hour = 5.9
  - Passengers per trip = 10.6
  - Average trip length (miles) = 40.8
- Efficiency Indicators (2019)
  - Cost per Boarding = $31.0
  - Cost per Passenger Mile = $0.8
  - Revenue per Passenger Mile = $0.04
  - Farebox Recovery Ratio = 4.8%
- Service Trips On-Time Performance (February 2021)
  - Early (< 0 mins.) = 68.8%
  - On-time (0 to 5 mins.) = 18.8%
  - Late (> 5 mins.) = 12.5%

Strengths and Opportunities for Improvement

Key Service Design Issues

- Vehicle trips about every 2 hours,
- End to end trips of 1:20 and 1:25 duration,
- Long layover time (35% of runtime), well in excess of the 22% minimum in labor contract.

Service Change Recommendations

- Adjust schedule to run a clean 2-hour frequency of service.
- Provide timed transfers with Route 15 – La Push and Route 16 – Neah Bay at the Forks Transit Center and Sappho, respectively.
- Eliminate deviation to Forks Hospital and rely on timed transfers with new microtransit service on Route 17 – Forks Shuttle.
- Use additional runtime and excess layover time to extend the route in Port Angeles and provide a one-seat ride to the East Port Angeles Walmart.
- This would make the service more attractive by eliminating a double transfer requirement or barrier for riders of Routes 15, 16 and 17 to access East PA.

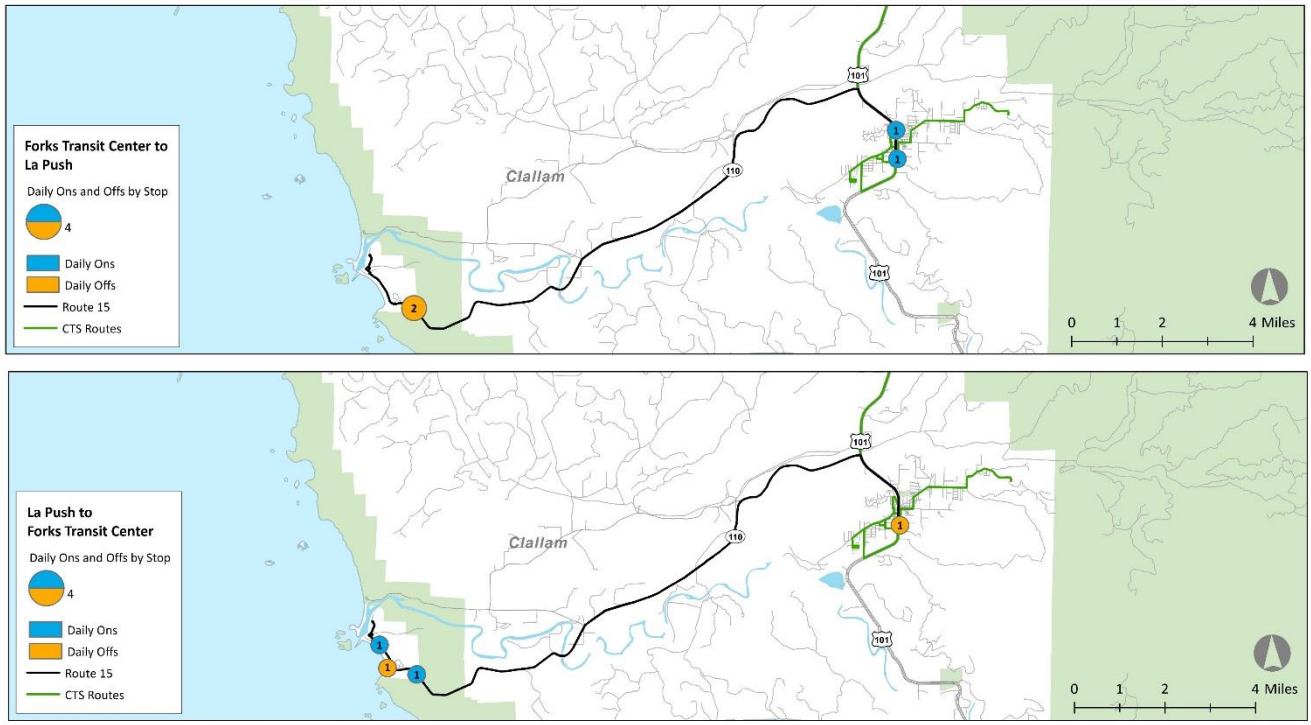
Route 15 – La Push

Service Characteristics

- Route length = 16 miles
- Route variants:
  - Forks Transit Center to La Push
- Service hours:
  - 7:20 a.m. – 4:30 p.m. weekday
  - 9:20 a.m. – 5:45 p.m. Saturday
- Frequency:
  - 3 trips per direction, weekday
  - 3 trips per direction, Saturday

Ridership Activity

Figure 31: Route 15 – Weekday Ons and Offs Activity per Stop

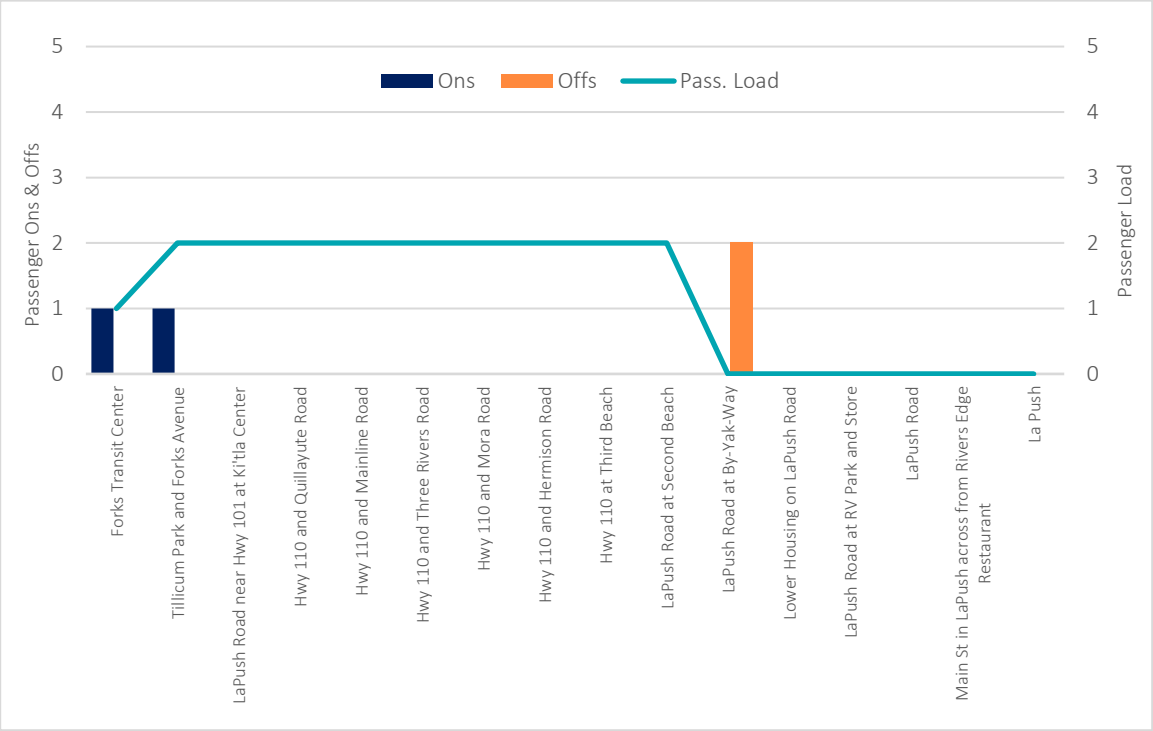


Note: The circle representing the daily "ons" and "offs" in the legend is a proportional symbol. It's size on the map represents the passenger activity volume at each stop, both daily ons and offs per stop, and the size of the symbol in the legend provides a reference only. For example, the number "4" next to the circle indicates that there are 4 ons/offs, or 2 ons and 2 offs. For stops with more than 4 ons/offs, the circle will appear larger. For stops with less than 4 ons/offs, the circle will appear smaller.

Source: Walker Consultants 2021

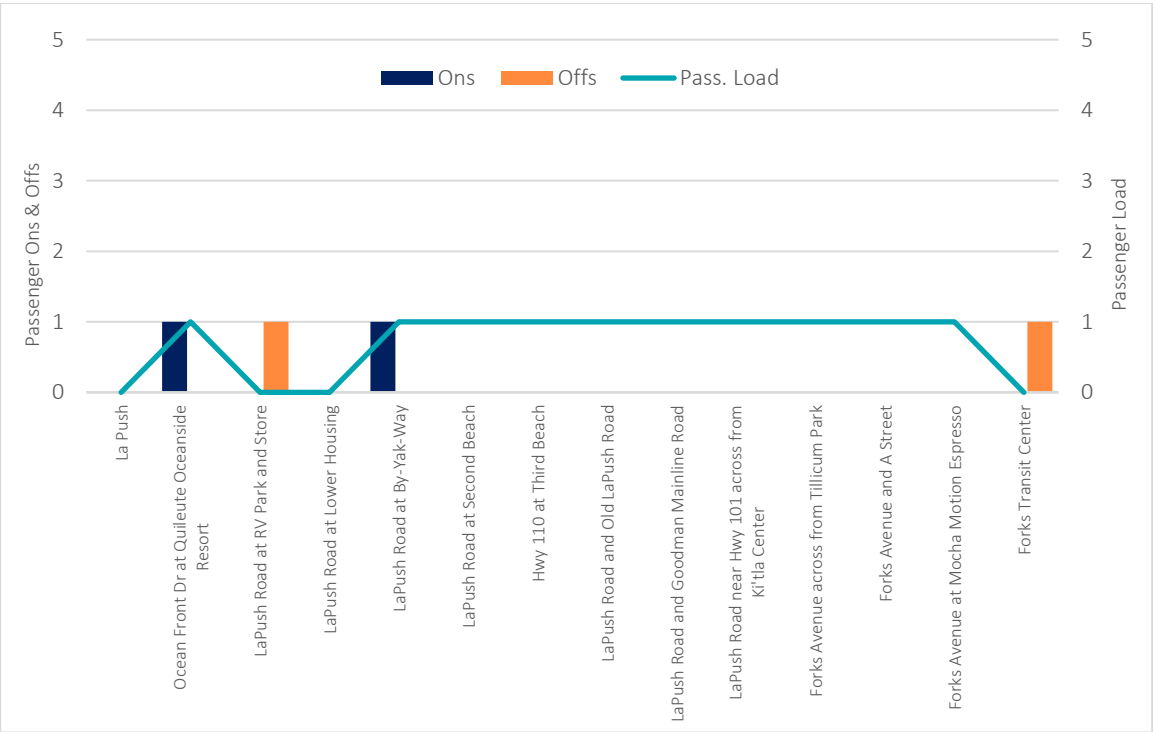
Passenger Load Profile

Figure 32: Westbound to La Push



Source: Walker Consultants 2021

Figure 33: Eastbound to Forks Transit Center



Source: Walker Consultants 2021

Service Performance

- Productivity Indicators (2019)
  - Weekday boardings = 18
  - Passengers per hour = 5.4
  - Passengers per trip = 3.0
  - Average trip length (miles) = 10.7
- Efficiency Indicators (2019)
  - Cost per Boarding = $32.8
  - Cost per Passenger Mile = $3.1
  - Revenue per Passenger Mile = $0.09
  - Farebox Recovery Ratio = 3.0%
- Service Trips On-Time Performance (February 2021)
  - Early (< 0 mins.) = 0.0%
  - On-time (0 to 5 mins.) = 100.0%
  - Late (> 5 mins.) = 0.0%

Strengths and Opportunities for Improvement

Key Service Design Issues

- Vehicle trips about every 4 hours,
- Running time close to 30 minutes each way, with no ridership activity at intermediate stops and low traffic volume,
- Layover/recovery time currently provided by Route 17 – Forks Shuttle's schedule,
- Current Route 15 trips cannot be combined with Route 16 – Neah Bay trips, they occur at similar times, and require two different vehicles.

Service Change Recommendations

- If Route 17 is converted to microtransit service, with a dedicated/branded vehicle, Route 15 will require its own vehicle.
- Explore changing current trip schedule times and combining Route 15 with Route 16 trips to eliminate the need for an additional vehicle on Route 15.
- Alternatively, explore adding a vehicle to Route 15 and combining driver runs with Route 17 to avoid impacts on service reliability of Route 16.
- Explore provision of trips every 4 hours and timed connections with Route 14 – Forks (which is recommended for service every 2 hours).
- This will allow riders to travel from La Push to Port Angeles and back more easily.

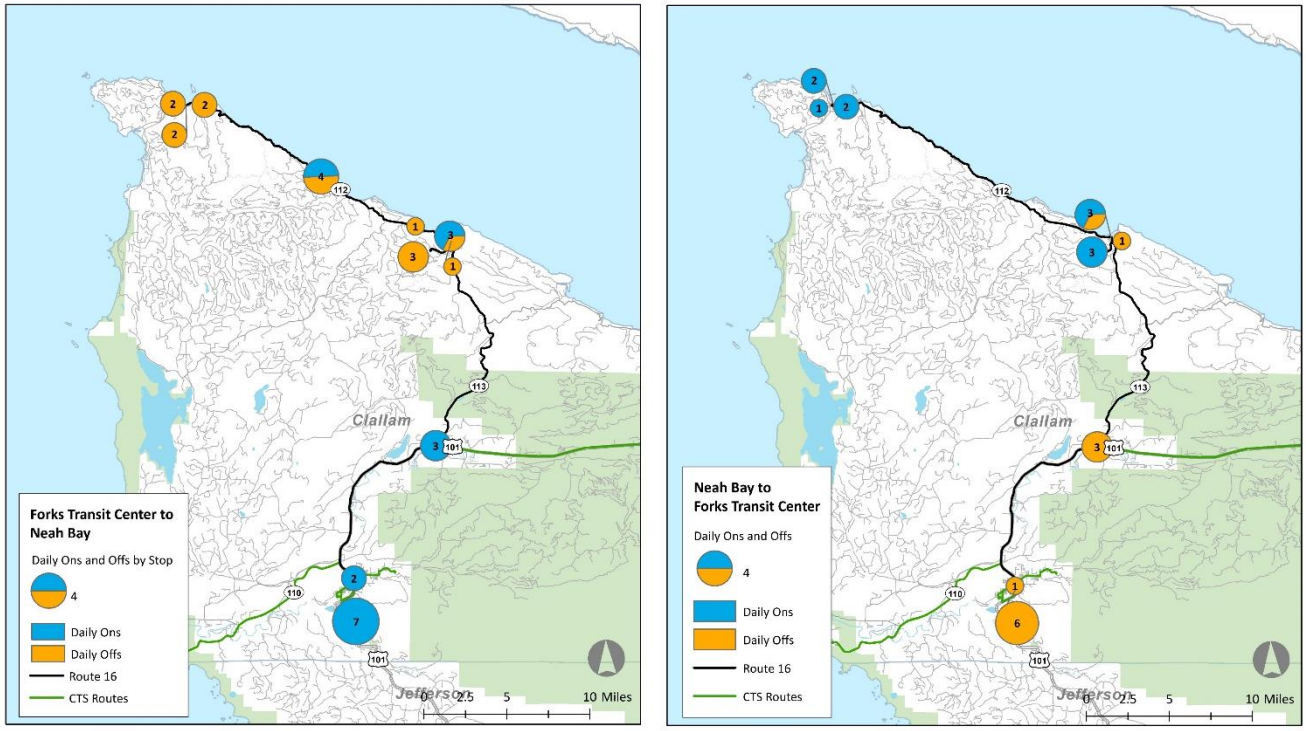
Route 16 – Neah Bay

Service Characteristics

- Route length = 53 miles
- Route variant:
  - Forks Transit Center to Neah Bay
  - Forks Transit Center to Neah Bay with deviation to Clallam Bay Corrections Center
- Service hours:
  - 6:45 a.m. – 8:35 p.m. weekday
  - 8:30 a.m. – 8:35 p.m. Saturday
- Frequency
  - 4 trips per direction, weekday
  - 2 trips per direction, Saturday

Ridership Activity

Figure 34: Route 16 – Weekday Ons and Offs Activity per Stop

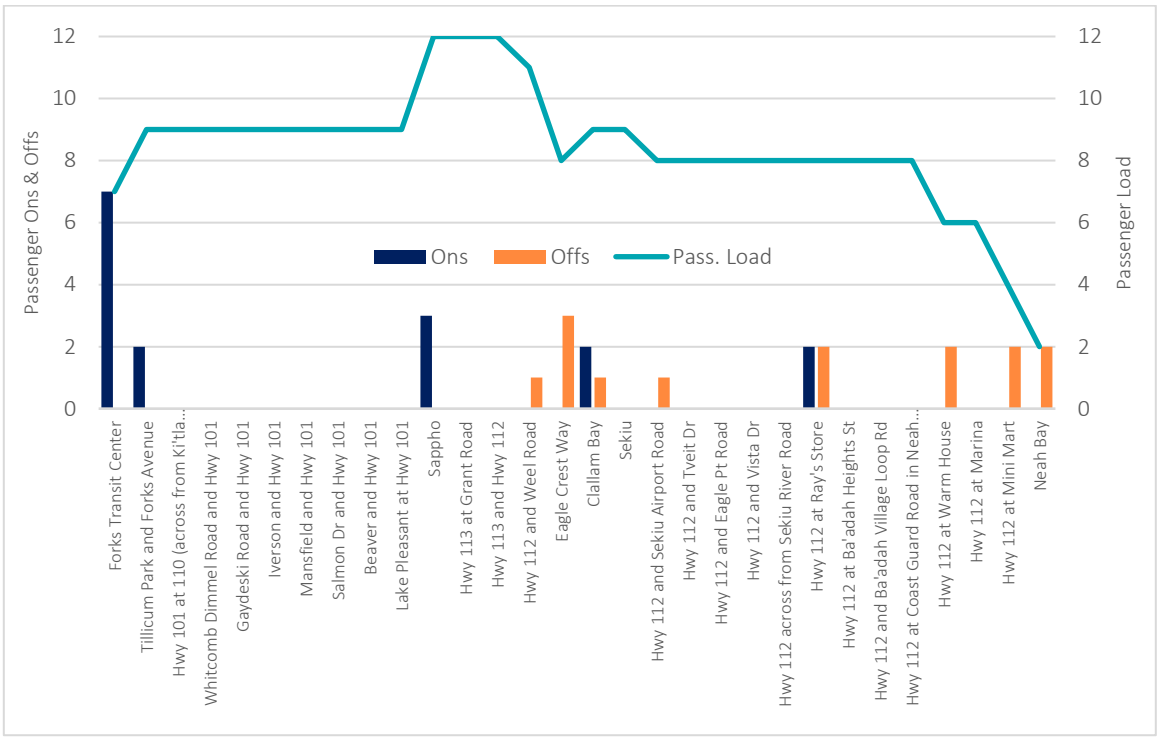


Note: The circle representing the daily "ons" and "offs" in the legend is a proportional symbol. It's size on the map represents the passenger activity volume at each stop, both daily ons and offs per stop, and the size of the symbol in the legend provides a reference only. For example, the number "4" next to the circle indicates that there are 4 ons/offs, or 2 ons and 2 offs. For stops with more than 4 ons/offs, the circle will appear larger. For stops with less than 4 ons/offs, the circle will appear smaller.

Source: Walker Consultants 2021

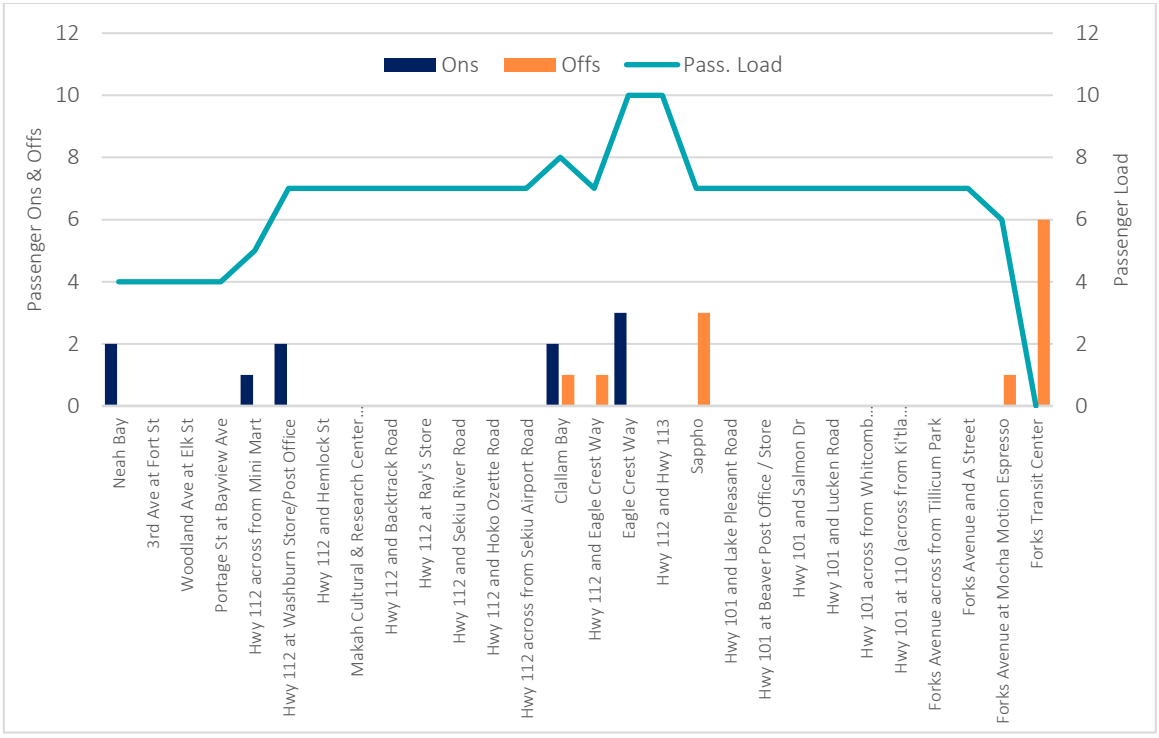
Passenger Load Profile

Figure 35: Northbound to Clallam Bay/Neah Bay


Passenger Ons & Offs
Passenger Load
Ons
Offs
Pass. Load
Forks Transit Center
Tillicum Park and Forks Avenue
Hwy 101 at 110 (across from Ki'tla...
Whitcomb Dimmel Road and Hwy 101
Gaydeski Road and Hwy 101
Iverson and Hwy 101
Mansfield and Hwy 101
Salmon Dr and Hwy 101
Beaver and Hwy 101
Lake Pleasant at Hwy 101
Sappho
Hwy 113 at Grant Road
Hwy 113 and Hwy 112
Hwy 112 and Weel Road
Eagle Crest Way
Clallam Bay
Sekiu
Hwy 112 and Sekiu Airport Road
Hwy 112 and Tveit Dr
Hwy 112 and Eagle Pt Road
Hwy 112 and Vista Dr
Hwy 112 across from Sekiu River Road
Hwy 112 at Ray's Store
Hwy 112 at Ba'adah Heights St
Hwy 112 and Ba'adah Village Loop Rd
Hwy 112 at Coast Guard Road in Neah...
Hwy 112 at Warm House
Hwy 112 at Marina
Hwy 112 at Mini Mart
Neah Bay

Source: Walker Consultants 2021

Figure 36: Southbound to Sappho/Forks Transit Center


Passenger Ons & Offs
Passenger Load
Ons
Offs
Pass. Load
Neah Bay
3rd Ave at Fort St
Woodland Ave at Elk St
Portage St at Bayview Ave
Hwy 112 across from Mini Mart
Hwy 112 at Washburn Store/Post Office
Hwy 112 and Hemlock St
Makah Cultural & Research Center...
Hwy 112 and Backtrack Road
Hwy 112 at Ray's Store
Hwy 112 and Sekiu River Road
Hwy 112 and Hoko Ozette Road
Hwy 112 across from Sekiu Airport Road
Clallam Bay
Hwy 112 and Eagle Crest Way
Eagle Crest Way
Hwy 112 and Hwy 113
Sappho
Hwy 101 and Lake Pleasant Road
Hwy 101 at Beaver Post Office / Store
Hwy 101 and Salmon Dr
Hwy 101 and Lucken Road
Hwy 101 across from Whitcomb...
Hwy 101 at 110 (across from Ki'tla...
Forks Avenue across from Tillicum Park
Forks Avenue and A Street
Forks Avenue at Mocha Motion Espresso
Forks Transit Center

Source: Walker Consultants 2021

Service Performance

- Productivity Indicators (2019)
  - Weekday boardings = 45
  - Passengers per hour = 3.3
  - Passengers per trip = 5.7
  - Average trip length (miles) = 34.7
- Efficiency Indicators (2019)
  - Cost per Boarding = $54.8
  - Cost per Passenger Mile = $1.6
  - Revenue per Passenger Mile = $0.03
  - Farebox Recovery Ratio = 1.8%
- Service Trips On-Time Performance (February 2021)
  - Early (< 0 mins.) = 37.5%
  - On-time (0 to 5 mins.) = 25.0%
  - Late (> 5 mins.) = 37.5%

Strengths and Opportunities for Improvement

Key Service Design Issues

- Vehicle trips scheduled every 3, 3.5 and 4 hours, roughly,
- End to end trip duration of 1:15, and 1:25 when deviating to the Corrections Facility,
- Passengers traveling between Neah Bay and Clallam Bay, Neah Bay/Clallam Bay and Sappho (transfers to Route 14), and Neah Bay/Clallam Bay and Forks.

Service Change Recommendations

- Morning and evening trips to Sappho and Forks get very low ridership and increase the cost of operating the service.
- Explore eliminating one roundtrip and operating 3 trips every 4 hours.
- Use resources to improve connections with Route 14 – Forks and Route 15 – la Push and reach additional destinations in Port Angeles.
- Coordinate schedule with Route 15 to avoid need for additional vehicle on Route 15 (if Route 17 is turned into a microtransit service), and time connections to La Push at the Forks Transit Center.
- Time morning and evening transfers with Route 14 at Sappho (to Port Angeles in the morning, to Clallam and Neah Bay in the evening).

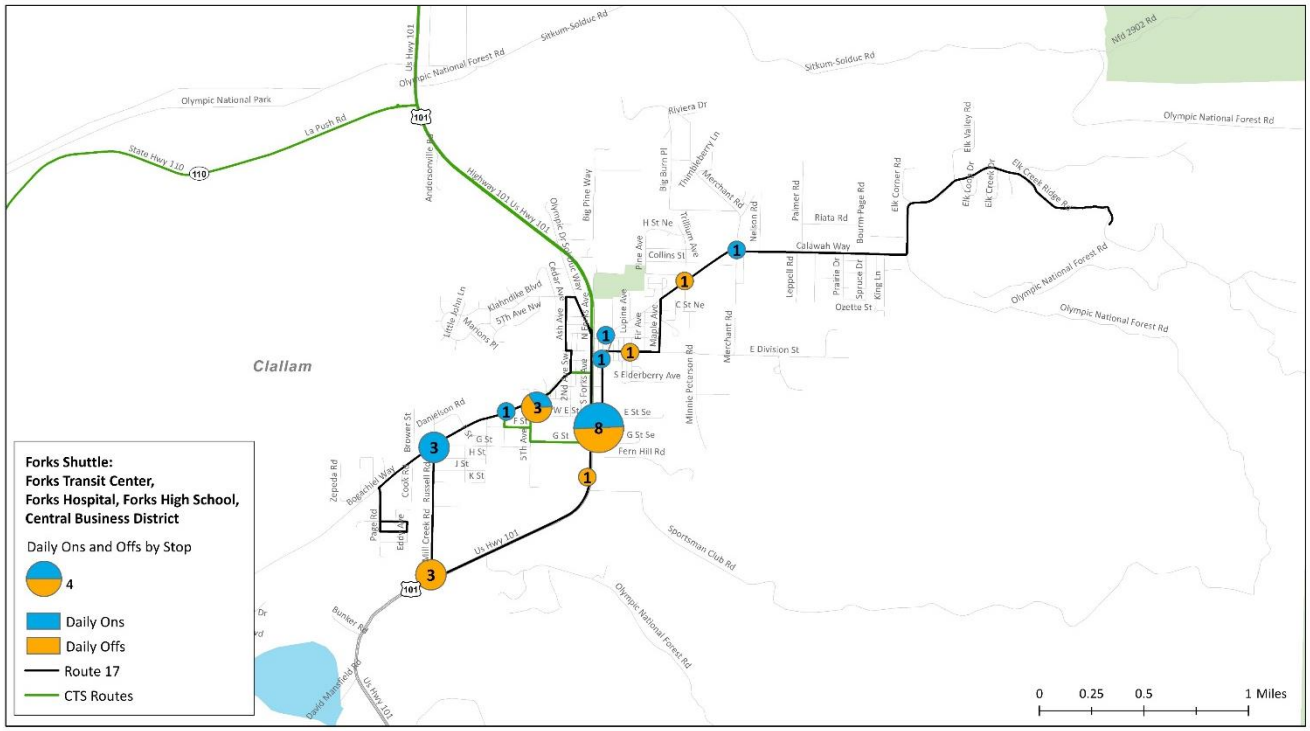
Route 17 – Forks Shuttle

Service Characteristics

- Route length (one-way) = 6.6 miles
- Route variants:
  - West Forks loop via Forks Hospital and Airport
  - Forks Transit Center to Elk Creek Drive
- Service hours:
  - 6:53 a.m. – 5:19 p.m. weekday
  - 8:53 a.m. – 4:49 p.m. Saturday
- Frequency
  - Hourly with gaps, weekday
  - Hourly with gaps, Saturday

Ridership Activity

Figure 37: Route 17 – Weekday Ons and Offs Activity per Stop

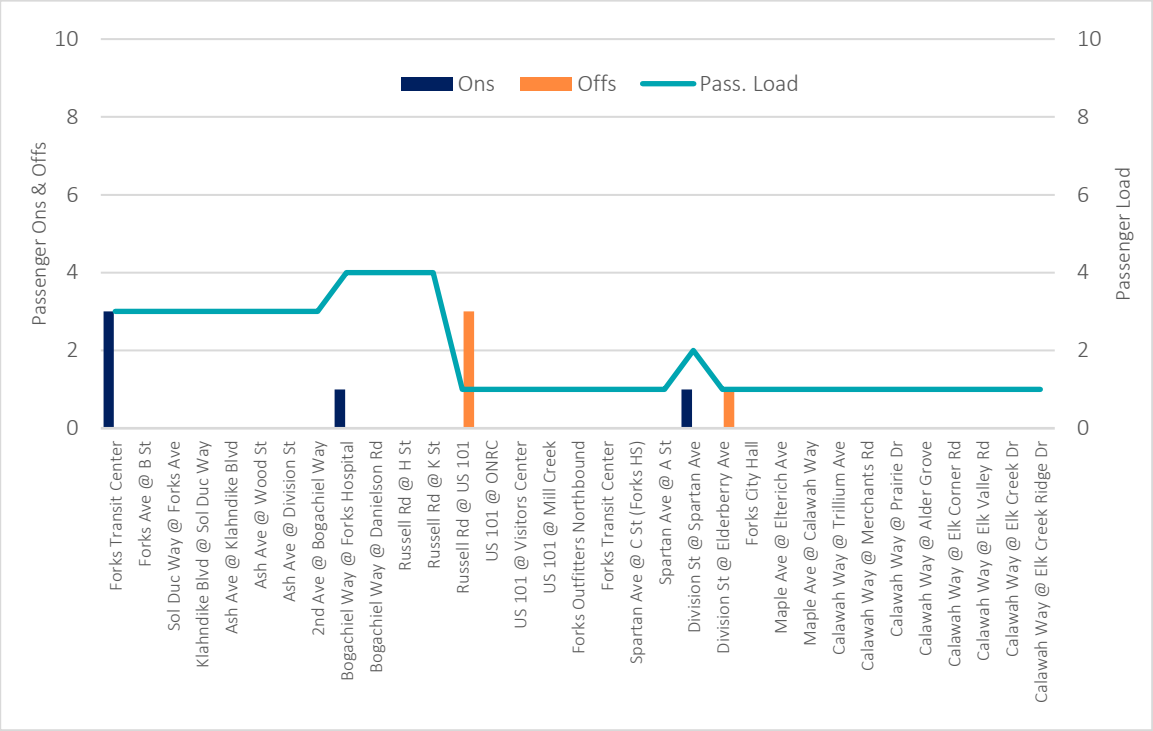


Note: The circle representing the daily "ons" and "offs" in the legend is a proportional symbol. It's size on the map represents the passenger activity volume at each stop, both daily ons and offs per stop, and the size of the symbol in the legend provides a reference only. For example, the number "4" next to the circle indicates that there are 4 ons/offs, or 2 ons and 2 offs. For stops with more than 4 ons/offs, the circle will appear larger. For stops with less than 4 ons/offs, the circle will appear smaller.

Source: Walker Consultants 2021

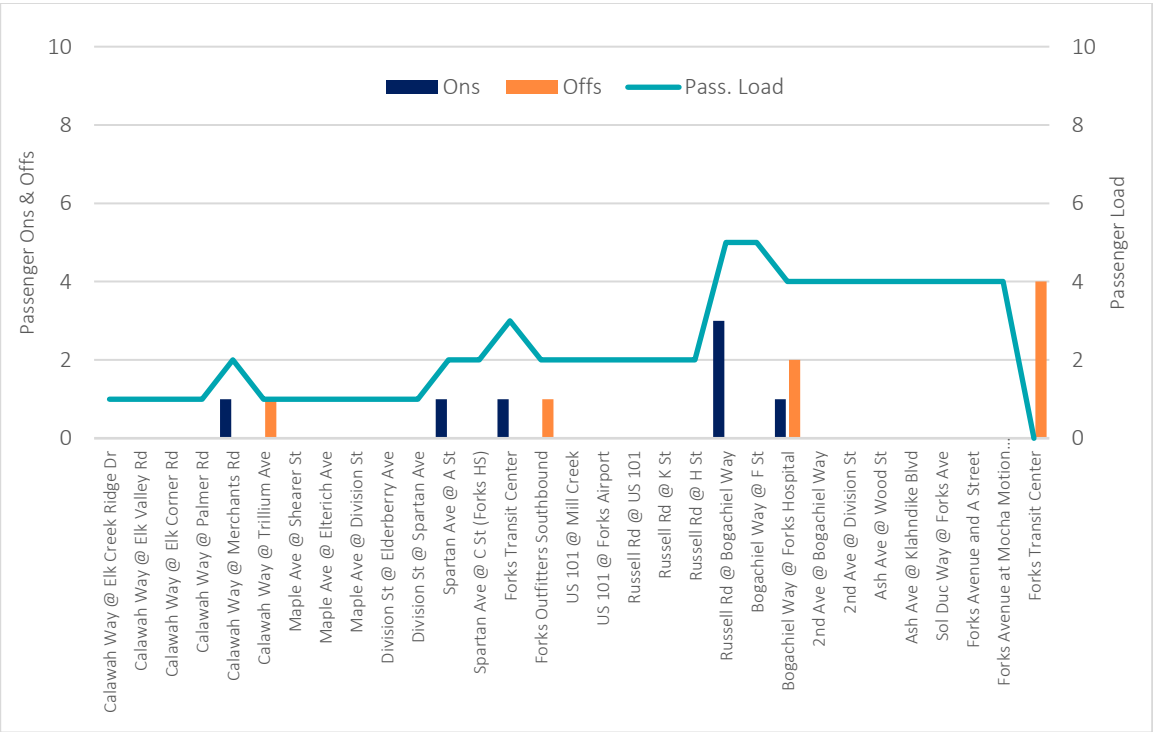
Passenger Load Profile

Figure 38: Outbound to Elk Creek Ridge Dr.


Ons
Offs
Pass. Load
Passenger Ons & Offs
Passenger Load
0
2
4
6
8
10
Forks Transit Center
Forks Ave @ B St
Sol Duc Way @ Forks Ave
Klahndike Blvd @ Sol Duc Way
Ash Ave @ Klahndike Blvd
Ash Ave @ Wood St
Ash Ave @ Division St
2nd Ave @ Bogachiel Way
Bogachiel Way @ Forks Hospital
Bogachiel Way @ Danielson Rd
Russell Rd @ H St
Russell Rd @ K St
Russell Rd @ US 101
US 101 @ ONRC
US 101 @ Visitors Center
US 101 @ Mill Creek
Forks Outfitters Northbound
Forks Transit Center
Spartan Ave @ C St (Forks HS)
Spartan Ave @ A St
Division St @ Spartan Ave
Division St @ Elderberry Ave
Forks City Hall
Maple Ave @ Elterich Ave
Maple Ave @ Calawah Way
Calawah Way @ Trillium Ave
Calawah Way @ Merchants Rd
Calawah Way @ Prairie Dr
Calawah Way @ Alder Grove
Calawah Way @ Elk Corner Rd
Calawah Way @ Elk Valley Rd
Calawah Way @ Elk Creek Dr
Calawah Way @ Elk Creek Ridge Dr

Source: Walker Consultants 2021

Figure 39: Inbound to Forks Transit Center


Ons
Offs
Pass. Load
Passenger Ons & Offs
Passenger Load
0
2
4
6
8
10
Calawah Way @ Elk Creek Ridge Dr
Calawah Way @ Elk Valley Rd
Calawah Way @ Elk Corner Rd
Calawah Way @ Palmer Rd
Calawah Way @ Merchants Rd
Calawah Way @ Trillium Ave
Maple Ave @ Shearer St
Maple Ave @ Elterich Ave
Maple Ave @ Division St
Division St @ Elderberry Ave
Division St @ Spartan Ave
Spartan Ave @ A St
Spartan Ave @ C St (Forks HS)
Forks Transit Center
Forks Outfitters Southbound
US 101 @ Mill Creek
US 101 @ Forks Airport
Russell Rd @ US 101
Russell Rd @ K St
Russell Rd @ H St
Russell Rd @ Bogachiel Way
Bogachiel Way @ F St
Bogachiel Way @ Forks Hospital
2nd Ave @ Bogachiel Way
2nd Ave @ Division St
Ash Ave @ Wood St
Ash Ave @ Klahndike Blvd
Sol Duc Way @ Forks Ave
Forks Avenue and A Street
Forks Avenue at Mocha Motion...
Forks Transit Center

Source: Walker Consultants 2021

Service Performance

- Productivity Indicators (2019)
  - Weekday boardings = 55
  - Passengers per hour = 7.5
  - Passengers per trip = 3.4
  - Average trip length (miles) = 2.2
- Efficiency Indicators (2019)
  - Cost per Boarding = $20.6
  - Cost per Passenger Mile = $9.5
  - Revenue per Passenger Mile = $0.46
  - Farebox Recovery Ratio = 4.8%
- Service Trips On-Time Performance (February 2021)
  - Early (< 0 mins.) = 12.5%
  - On-time (0 to 5 mins.) = 87.5%
  - Late (> 5 mins.) = 0.0%

Strengths and Opportunities for Improvement

Key Service Design Issues

- Vehicle trips provided every 1 and 2 hours.
- Gaps in service when Route 17's vehicle is doing trips on Route 15 to La Push. This happens three times per day.
- The service route is a confusing operation that combines a simple bi-directional route to Elk Creek and a double loop through the hospital and airport area.
- It goes through the Forks Transit Center twice during one complete cycle, in addition to starting and ending at this location. This confuses riders who cannot tell in which direction is the bus heading next.

Service Change Recommendations

- Eliminate the fixed-route operation and convert the Route into a microtransit service.
- Operate on-demand with no advanced reservations, through a mobile app or by calling a phone number.
- Increase both, the hours of service and the service area to cover all residential areas in Forks.
- Operate from 8:30 a.m. to 6:30 p.m., Monday to Friday.
- Operate within a 3 square mile area. That can cover all Forks residential areas and ensure pickups/wait times of no more than 20 minutes.
- It will need one bus dedicated to the service, and special branding or wrapping for the microtransit service.
- It will also need a live person answering phone calls, requesting rides, that could be provided by dispatch or other staff.

Route 20 – College/Medical Center

Service Characteristics

- Route length (one-way) = 3.2 miles
- Route variants:
  - Gateway Transit Center to Peninsula College
  - Gateway Transit Center to Peninsula College with deviation to Melody Lane
- Service hours:
  - 6:55 a.m. – 6:50 p.m. weekday
  - 7:55 a.m. – 6:25 p.m. Saturday
- Frequency
  - Every 30 minutes, weekday
  - Every 60 minutes, Saturday

Ridership Activity

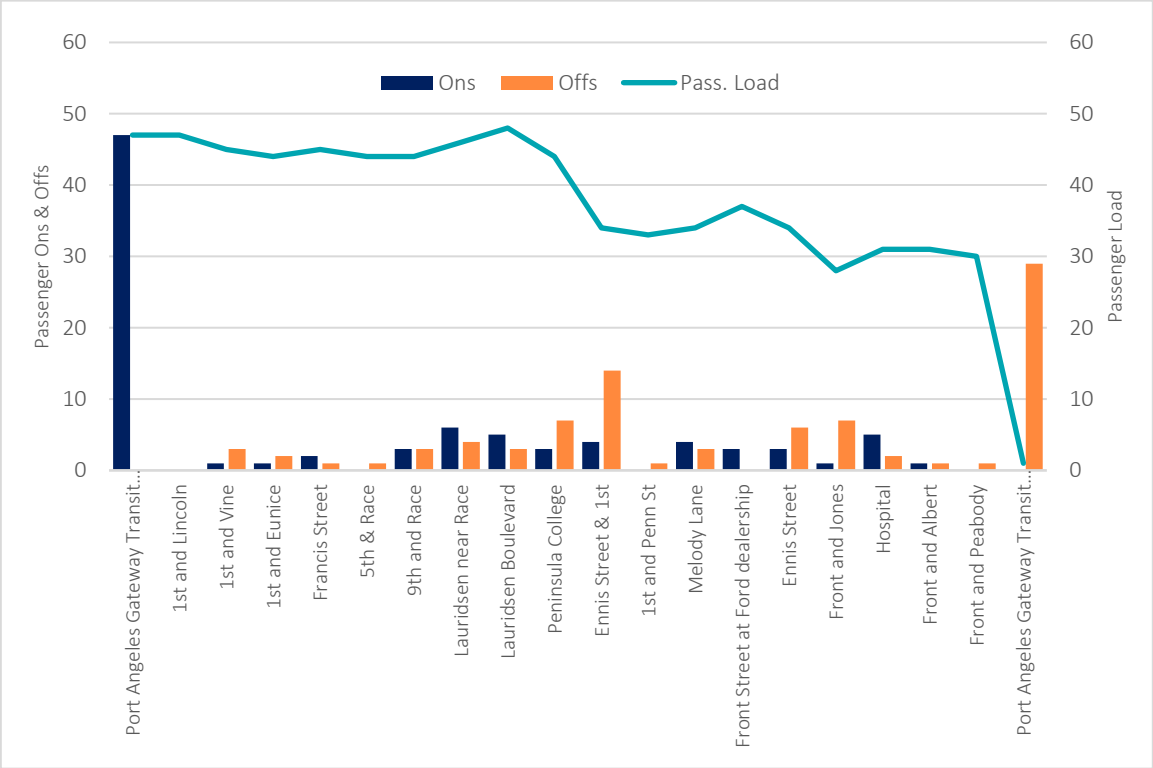
Figure 40: Route 20 – Weekday Ons and Offs Activity per Stop

Note: The circle representing the daily "ons" and "offs" in the legend is a proportional symbol. It's size on the map represents the passenger activity volume at each stop, both daily ons and offs per stop, and the size of the symbol in the legend provides a reference only. For example, the number "10" next to the circle indicates that there are 10 ons/offs, or 5 ons and 5 offs. For stops with more than 10 ons/offs, the circle will appear larger. For stops with less than 10 ons/offs, the circle will appear smaller.

Source: Walker Consultants 2021

Passenger Load Profile

Figure 41: Counter-Clockwise to Peninsula College/Melody Lane



Source: Walker Consultants 2021

Service Performance

- Productivity Indicators (2019)
  - Weekday boardings = 354
  - Passengers per hour = 28.2
  - Passengers per trip = 7.1
  - Average trip length (miles) = 2.6
- Efficiency Indicators (2019)
  - Cost per Boarding = $5.3
  - Cost per Passenger Mile = $2.1
  - Revenue per Passenger Mile = $0.39
  - Farebox Recovery Ratio = 18.9%
- Service Trips On-Time Performance (February 2021)
  - Early (< 0 mins.) = 64.0%
  - On-time (0 to 5 mins.) = 28.0%
  - Late (> 5 mins.) = 8.0%

Strengths and Opportunities for Improvement

Key Service Design Issues

- 20-minute runtime for the regular loop, and
- 25-minute runtime for trips that are extended to Melody Lane (every other trip).
- Passenger trips between Gateway and Lauridsen and the Peninsula College.
- There are also trips between Lauridsen/College and Ennis & 1st / Front Streets.

Service Change Recommendations

- The extension to Melody Lane creates an inconvenient trip to Gateway for those boarding at Lauridsen and the Peninsula College.
- Redesign the route to operate bi-directionally on a single alignment (no loop) between Gateway, 8th Street, Lauridsen, Peninsula College and Melody Lane.
- This will provide a direct and more efficient service for everyone along the route. Bi-directional service allows people to make the same trip on the way in and the way out, and it ensures access to all origins-destination to everyone along the route without having to go out of direction or through the Gateway Transit Center.
- Currently, those going around the loop have to wait at Gateway Transit Center at least 5 minutes before completing the trip, creating a major inconvenience, or they have to deviate through Melody Lane, also adding inconvenience. A bi-directional route allows for extended trips to Melody Lane without impacting any riders along the route.
- Extend the service hours to 9:00 p.m. to provide better service to Peninsula College.

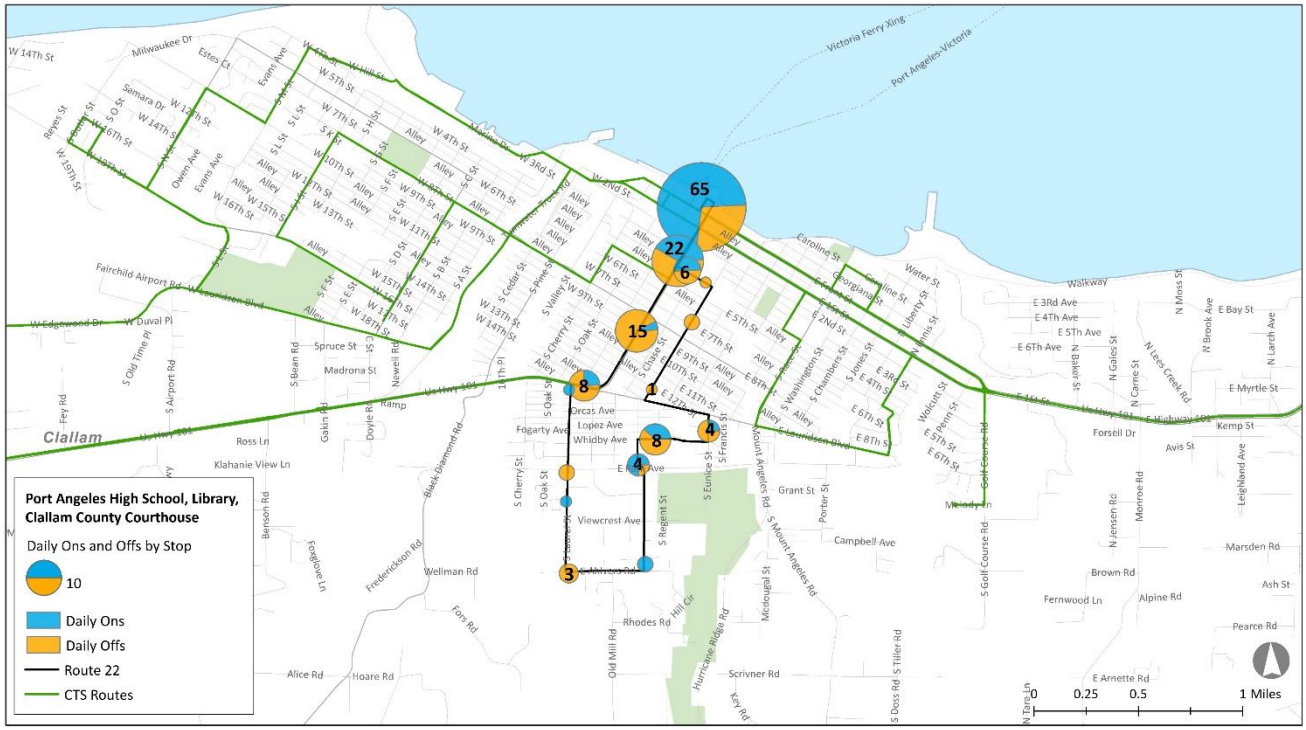
Route 22 – Lincoln/Peabody

Service Characteristics

- Route length (one-way) = 2.4 miles
- Route variants:
  - Gateway Transit Center to Port Angeles High School
- Service hours:
  - 6:55 a.m. – 6:55 p.m. weekday
  - 8:25 a.m. – 6:55 p.m. Saturday
- Frequency:
  - Every 30 minutes, weekday
  - Every 60 minutes, Saturday

Ridership Activity

Figure 42: Route 22 – Weekday Ons and Offs Activity per Stop

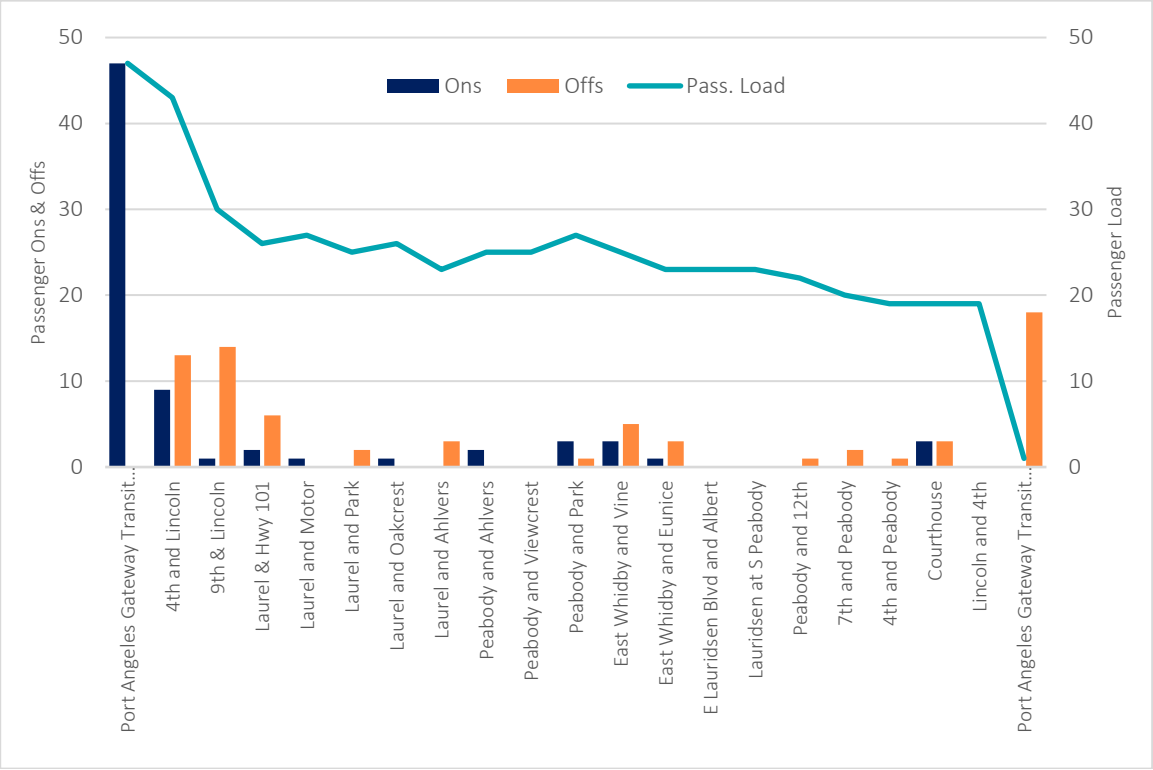


Note: The circle representing the daily "ons" and "offs" in the legend is a proportional symbol. It's size on the map represents the passenger activity volume at each stop, both daily ons and offs per stop, and the size of the symbol in the legend provides a reference only. For example, the number "10" next to the circle indicates that there are 10 ons/offs, or 5 ons and 5 offs. For stops with more than 10 ons/offs, the circle will appear larger. For stops with less than 10 ons/offs, the circle will appear smaller.

Source: Walker Consultants 2021

Passenger Load Profile

Figure 43: Counter-Clockwise to Port Angeles High School



Source: Walker Consultants 2021

Service Performance

- Productivity Indicators (2019)
  - Weekday boardings = 329
  - Passengers per hour = 30.6
  - Passengers per trip = 6.9
  - Average trip length (miles) = 1.6
- Efficiency Indicators (2019)
  - Cost per Boarding = $4.9
  - Cost per Passenger Mile = $3.0
  - Revenue per Passenger Mile = $0.62
  - Farebox Recovery Ratio = 20.6%
- Service Trips On-Time Performance (February 2021)
  - Early (< 0 mins.) = 66.7%
  - On-time (0 to 5 mins.) = 29.2%
  - Late (> 5 mins.) = 4.2%

Strengths and Opportunities for Improvement

Key Service Design Issues

- Short loop that takes 18-20 minutes to complete.
- Long layover at Gateway of 10 to 12 minutes (50% of runtime, well in excess to the 22% minimum).
- Most ridership on Lincoln Street between Gateway and 9th Street, also served by Routes 10 - Joyce, Route 14 – Forks, and Route 24 – Cherry Hill.
- All these routes depart Gateway at about the same time, so there is no additional service frequency on the corridor, just multiple buses running at the same time.
- Counterclockwise loop operation not working for access to Library and Saar's Foods. In fact, the stop serving Saar's is across the street and there is not a safe crosswalk to cross Highway 101.
- Drivers' have many concerns with turns and operation along Whidby, Eunice and Francis.

Service Change Recommendations

- Redesign route to operate bi-directionally on a single alignment (no loop) connecting the Port Angeles High School, Saar's Foods, North Olympic Library, Lauridsen Blvd and Race Street, with the Olympic Medical Center and Gateway Transit Center.
- This will provide more efficient and direct service for everyone along the route, opening access to a large section of the city without needing to make a transfer at Gateway.
- Extend the hours of service to 9:00 p.m.

Route 24 – Cherry Hill

Service Characteristics

- Route length (one-way) = 3 miles
- Route variants:
  - Gateway Transit Center to I Street loop
  - Gateway Transit Center to CTS Depot via C Street
- Service hours:
  - 5:13 a.m. – 10:13 p.m. weekday
  - 7:08 a.m. – 8:43 p.m. Saturday
- Frequency:
  - Every 30 minutes, weekday
  - Every 60 minutes, Saturday

Ridership Activity

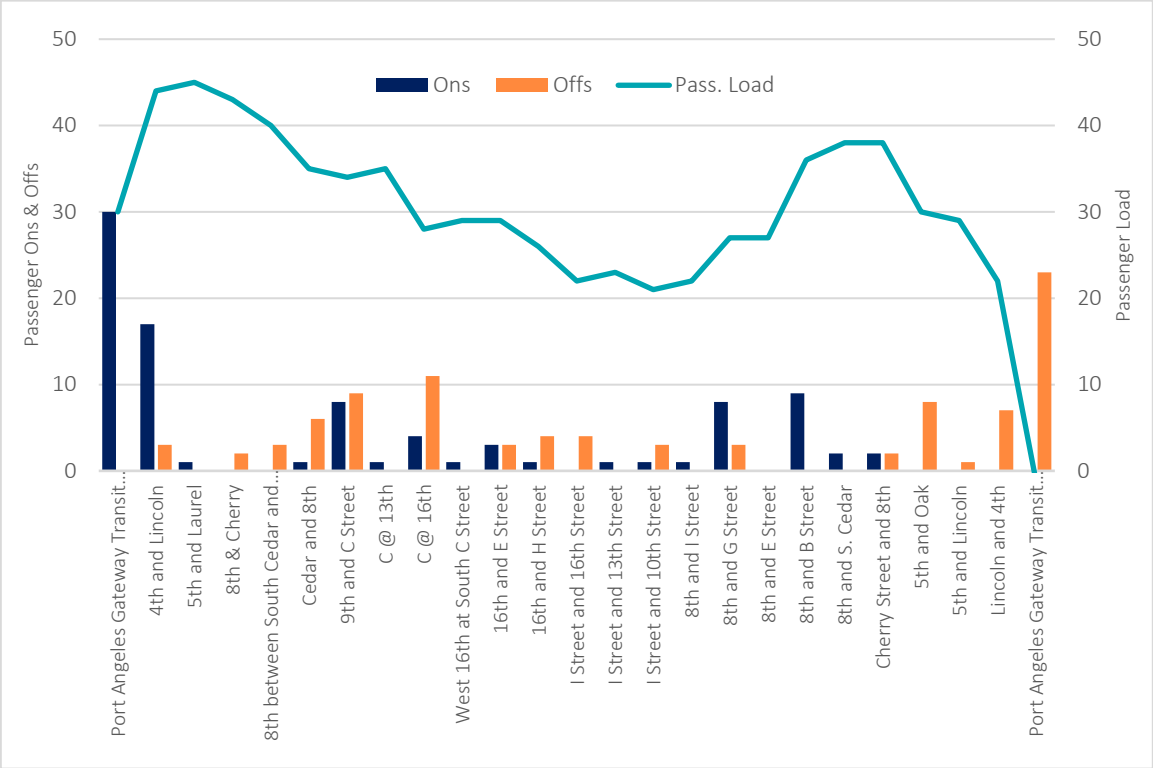
Figure 44: Route 24 – Weekday Ons and Offs Activity per Stop

Note: The circle representing the daily "ons" and "offs" in the legend is a proportional symbol. It's size on the map represents the passenger activity volume at each stop, both daily ons and offs per stop, and the size of the symbol in the legend provides a reference only. For example, the number "10" next to the circle indicates that there are 10 ons/offs, or 5 ons and 5 offs. For stops with more than 10 ons/offs, the circle will appear larger. For stops with less than 10 ons/offs, the circle will appear smaller.

Source: Walker Consultants 2021

Passenger Load Profile

Figure 45: Clockwise to Cherry Hill/I Street



Source: Walker Consultants 2021

Service Performance

- Productivity Indicators (2019)
  - Weekday boardings = 285
  - Passengers per hour = 22.6
  - Passengers per trip = 5.1
  - Average trip length (miles) = 2.1
- Efficiency Indicators (2019)
  - Cost per Boarding = $6.7
  - Cost per Passenger Mile = $3.2
  - Revenue per Passenger Mile = $0.48
  - Farebox Recovery Ratio = 14.9%
- Service Trips On-Time Performance (February 2021)
  - Early (< 0 mins.) = 58.1%
  - On-time (0 to 5 mins.) = 41.9%
  - Late (> 5 mins.) = 0.0%

Strengths and Opportunities for Improvement

Key Service Design Issues

- Short loop that takes 19 minutes to complete.
- Long layover at Gateway of 11 minutes (50% of runtime, well in excess of 22% minimum).
- Passengers traveling between Gateway and Cherry St, Gateway and C St, and Gateway and 8th St.

Service Change Recommendations

- Running a bi-directional route up and down 8th St would provide access (within a 5-min walk) to most residents of the Westside.
- The one-way segment along 16th St runs within one-quarter of a mile (5-min walk) of Route 26.
- Most riders along this segment would have access to Route 26's service on C St, 18th St and 8th Street.
- Modify Route 24 to operate bi-directionally on a single alignment along 8th Street.
- Let Route 26 pick up the segment along C Street.
- Keep running service until 10:00 p.m.

Route 26 – Westside

Service Characteristics

- Route length (one-way) = 9.8 miles
- Route variants:
  - Gateway Transit Center to Serenity House
  - Gateway Transit Center to Elwha Tribal Center
- Service hours:
  - 6:35 a.m. – 8:22 p.m. weekday
  - 7:55 a.m. – 7:49 p.m. Saturday
- Frequency
  - Every 30/60 minutes, weekday
  - Every 60 minutes, Saturday

Ridership Activity

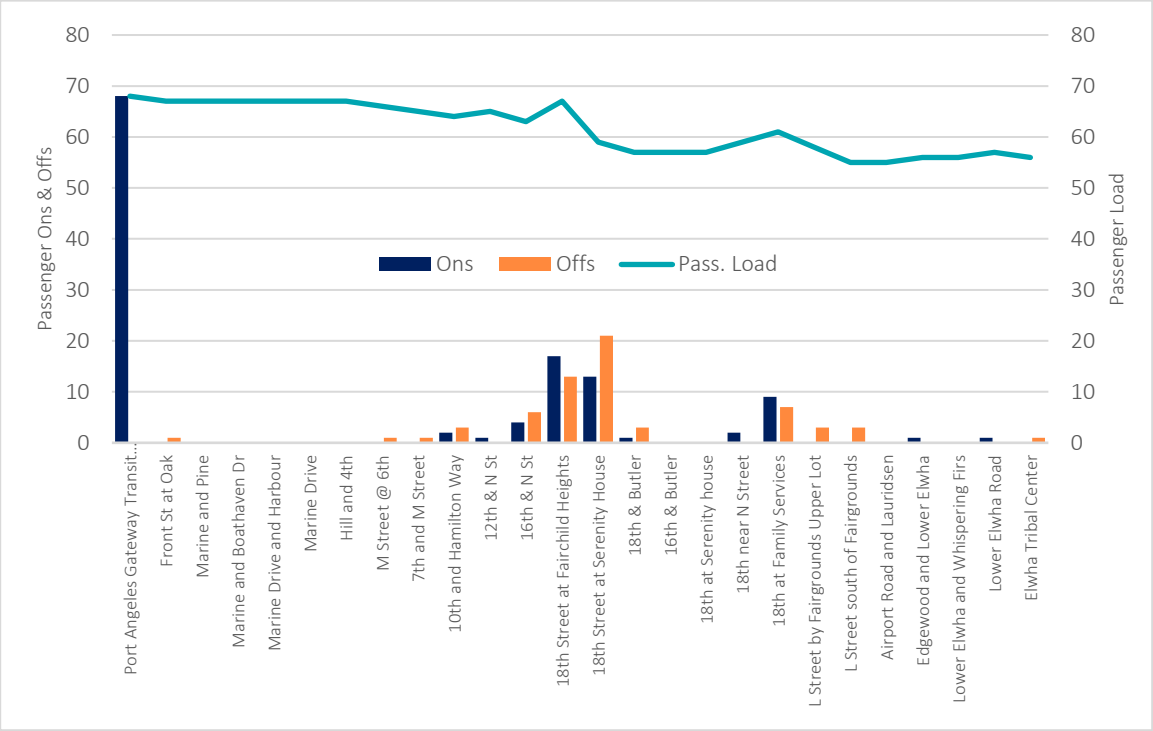
Figure 46: Route 26 – Weekday Ons and Offs Activity per Stop

Note: The circle representing the daily "ons" and "offs" in the legend is a proportional symbol. It's size on the map represents the passenger activity volume at each stop, both daily ons and offs per stop, and the size of the symbol in the legend provides a reference only. For example, the number "10" next to the circle indicates that there are 10 ons/offs, or 5 ons and 5 offs. For stops with more than 10 ons/offs, the circle will appear larger. For stops with less than 10 ons/offs, the circle will appear smaller.

Source: Walker Consultants 2021

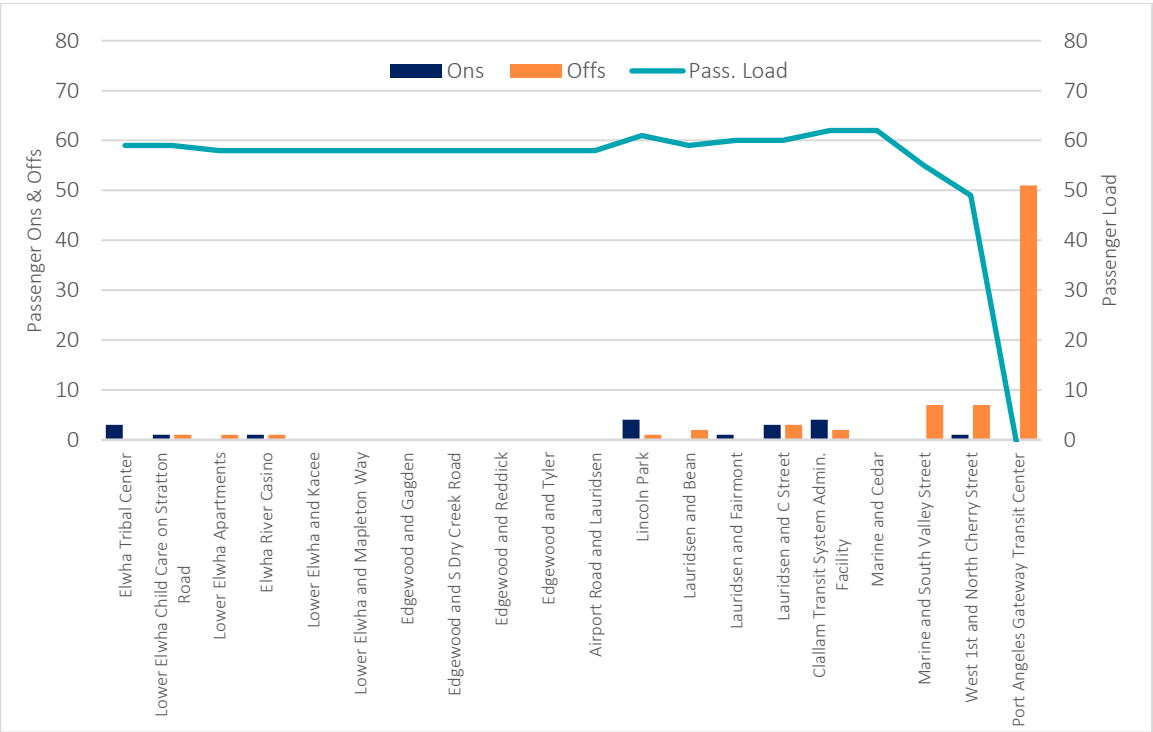
Passenger Load Profile

Figure 47: Westbound to Serenity House/Elwha Tribal Center



Source: Walker Consultants 2021

Figure 48: Eastbound to Gateway Transit Center



Source: Walker Consultants 2021

Service Performance

- Productivity Indicators (2019)
  - Weekday boardings = 331
  - Passengers per hour = 23.9
  - Passengers per trip = 8.3
  - Average trip length (miles) = 8.3
- Efficiency Indicators (2019)
  - Cost per Boarding = $6.8
  - Cost per Passenger Mile = $0.8
  - Revenue per Passenger Mile = $0.12
  - Farebox Recovery Ratio = 14.8%
- Service Trips On-Time Performance (February 2021)
  - Early (< 0 mins.) = 55.0%
  - On-time (0 to 5 mins.) = 45.0%
  - Late (> 5 mins.) = 0.0%

Strengths and Opportunities for Improvement

Key Service Design Issues

- Route 26 is two different routes – Westside and Lower Elwha, combined into one operation.
- They have 25 and 45 minutes of runtime, respectively.
- The combination creates gaps in the service schedule with trips every 30 and 60 minutes, impacting mostly the Westside route portion.
- Although gaps in service could also be a result of the vehicle blocking, which schedules this vehicle in multiple routes.
- Trips to Lower Elwha are provided every 2 hours.

Service Change Recommendations

- Break the route into two different routes – Westside and Lower Elwha.
- Redesign Route 26 to operate bi-directionally on a single route alignment along 18th St, Lauridsen, C St, 8th St and Lincoln St, connecting the Gateway Transit Center with C Street, the Fairgrounds and 18th St.
- Operate the Lower Elwha route along Hwy 101 to provide additional service between Gateway and Laird's Corner.
- Combine the Lower Elwha route with Route 10's vehicle schedule, to maintain scheduling efficiency.
- Extend the Lower Elwha route to East Port Angeles to provide additional employment and shopping destinations, and increased access to opportunities.
- This would help in adding additional frequency on 1st / Front St between Gateway and the East Port Angeles Walmart, and potentially attract new ridership from Routes 10 and Lower Elwha.

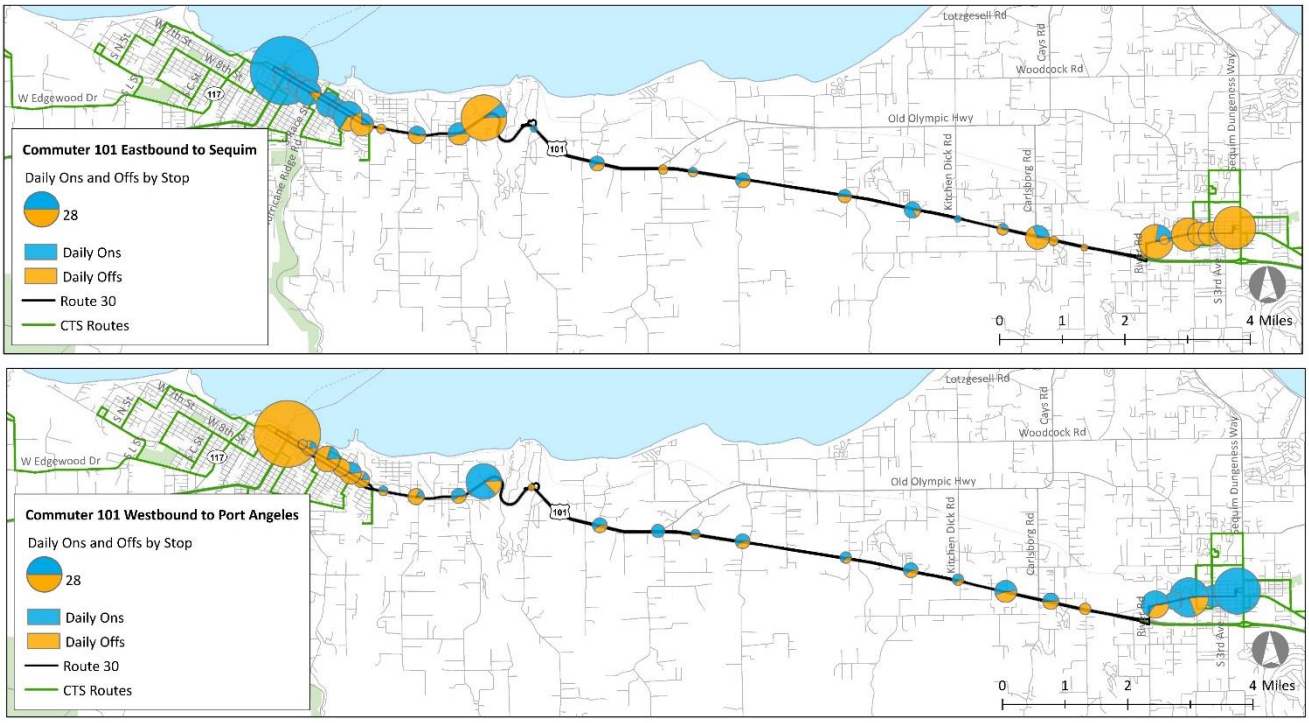
Route 30 – Hwy 101 Commuter

Service Characteristics

- Route length = 16 miles
- Route variants:
  - Gateway Transit Center to Sequim Transit Center via Deer Park Rest Stop
- Service hours:
  - 5:30 a.m. – 10:05 p.m. weekday
  - 7:25 a.m. – 8:30 p.m. Saturday
- Frequency:
  - Every 30 minutes, weekday
  - Every 60 minutes, Saturday

Ridership Activity

Figure 49: Route 30 – Weekday Ons and Offs Activity per Stop

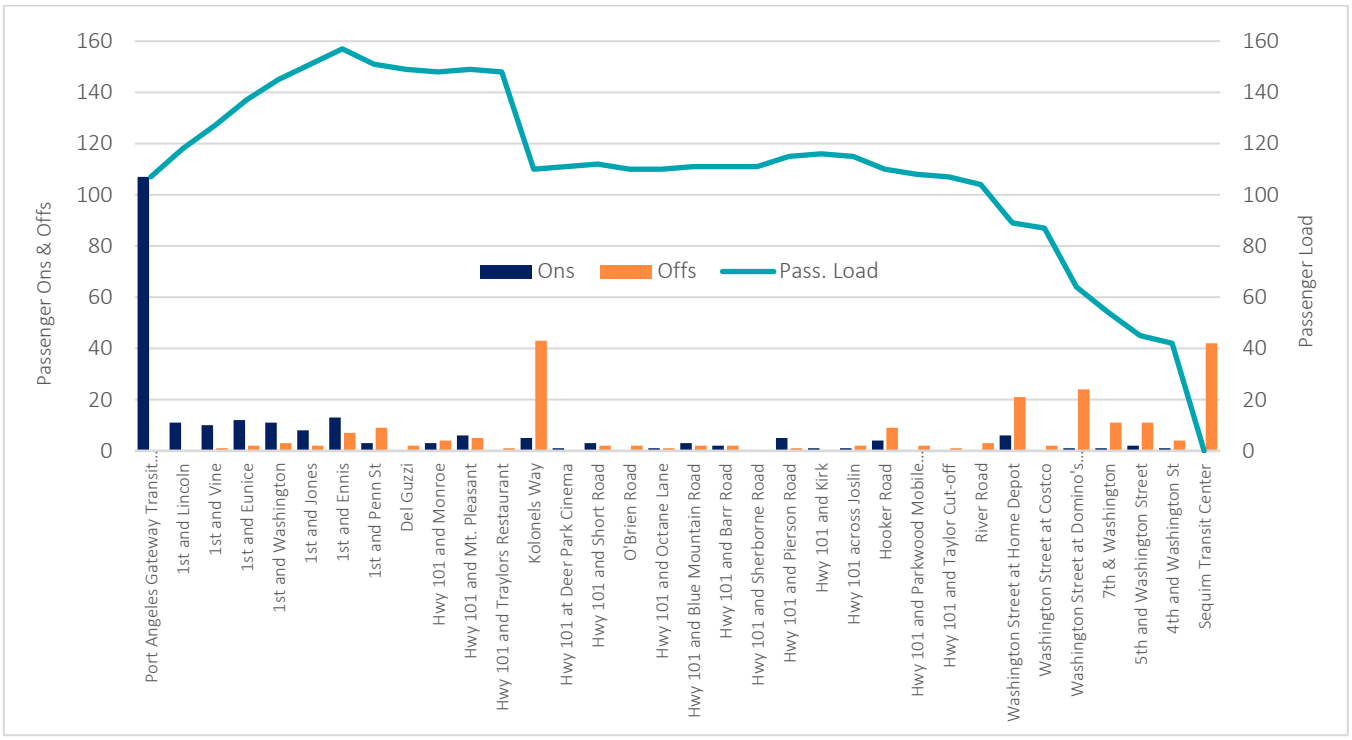


Note: The circle representing the daily "ons" and "offs" in the legend is a proportional symbol. It's size on the map represents the passenger activity volume at each stop, both daily ons and offs per stop, and the size of the symbol in the legend provides a reference only. For example, the number "28" next to the circle indicates that there are 28 ons/offs, or 14 ons and 14 offs. For stops with more than 28 ons/offs, the circle will appear larger. For stops with less than 28 ons/offs, the circle w appear smaller.

Source: Walker Consultants 2021

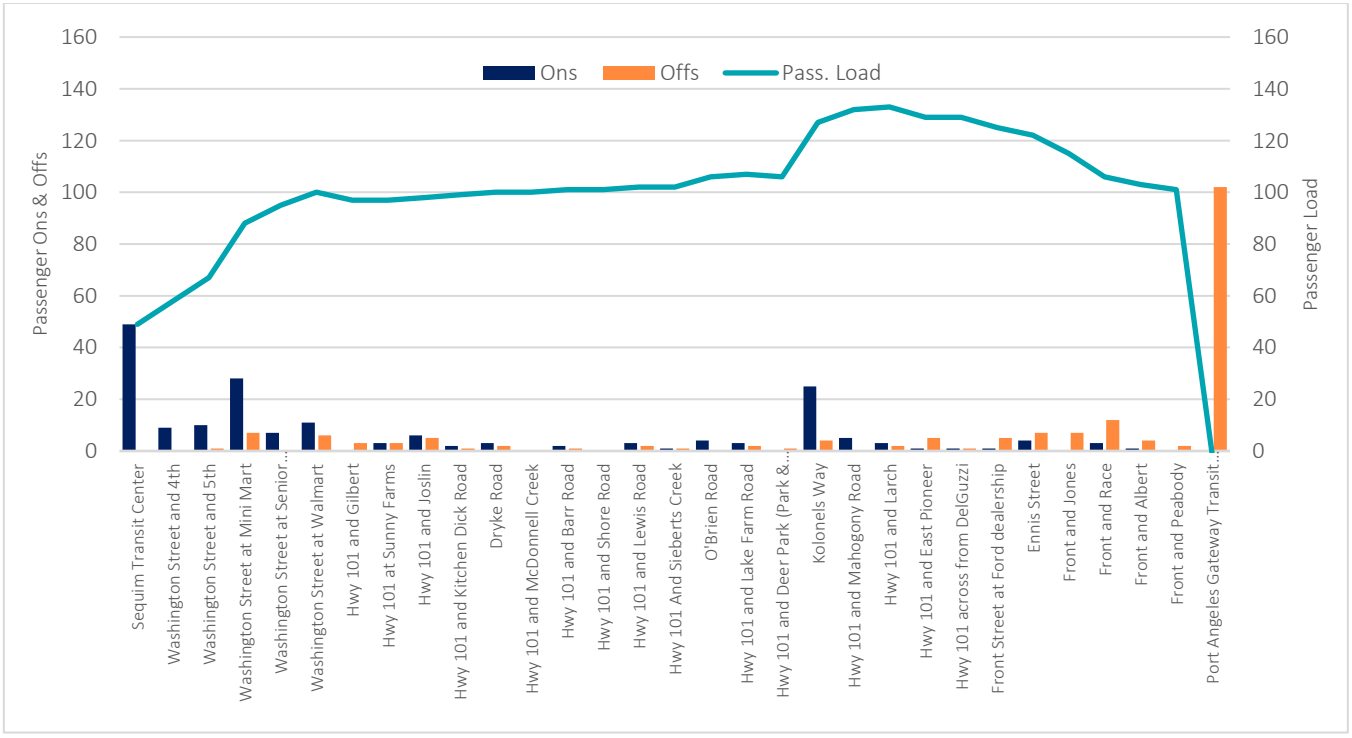
Passenger Load Profile

Figure 50: Eastbound to Sequim Transit Center



Source: Walker Consultants 2021

Figure 51: Westbound to Port Angeles/Gateway Transit Center



Source: Walker Consultants 2021

Service Performance

- Productivity Indicators (2019)
  - Weekday boardings = 763
  - Passengers per hour = 18.2
  - Passengers per trip = 14.1
  - Average trip length (miles) = 8.8
- Efficiency Indicators (2019)
  - Cost per Boarding = $9.1
  - Cost per Passenger Mile = $1.0
  - Revenue per Passenger Mile = $0.17
  - Farebox Recovery Ratio = 16.5%
- Service Trips On-Time Performance (February 2021)
  - Early (< 0 mins.) = 53.7%
  - On-time (0 to 5 mins.) = 40.7%
  - Late (> 5 mins.) = 5.6%

Strengths and Opportunities for Improvement

Key Service Design Issues

- The end-to-end trip takes 35 minutes to complete, or 70 minutes roundtrip. The schedule provides for a 90-minute cycle, which at a 30-minute frequency requires 3 vehicles to operate.
- Service frequency is reduced to hourly service after 6:00 p.m. until close at 10:00 p.m.
- The highest ridership is along the segment between Gateway TC and the East Port Angeles Walmart, and along Washington Street in Sequim.

Service Change Recommendations

- Consider eliminating the deviation to the Deer Park Park & Ride. It adds time and inconvenience to most Route 30 riders that are traveling through.
- Serve this location with an extension of Route 10 - Joyce, a new route to Lower Elwha (redesigned Route 26) and Route 14 – Forks to East Port Angeles, using Deer Park Park & Ride as the terminus or turnaround point.
- Extend the service hours to 11:00 p.m.
- Extend the 30-minute service frequency to 9:00 p.m.

Route 40 – Sequim Shuttle

Service Characteristics

- Route length (one-way) = 4.7 miles
- Route variants:
  - Sequim Transit Center to Sequim Walk-In Clinic and Walmart
- Service hours:
  - 8:35 a.m. – 4:40 p.m. weekday
  - No service on Saturday
- Frequency:
  - 9 loops, every 45 minutes, with gaps
  - About 35-minute roundtrip

Ridership Activity

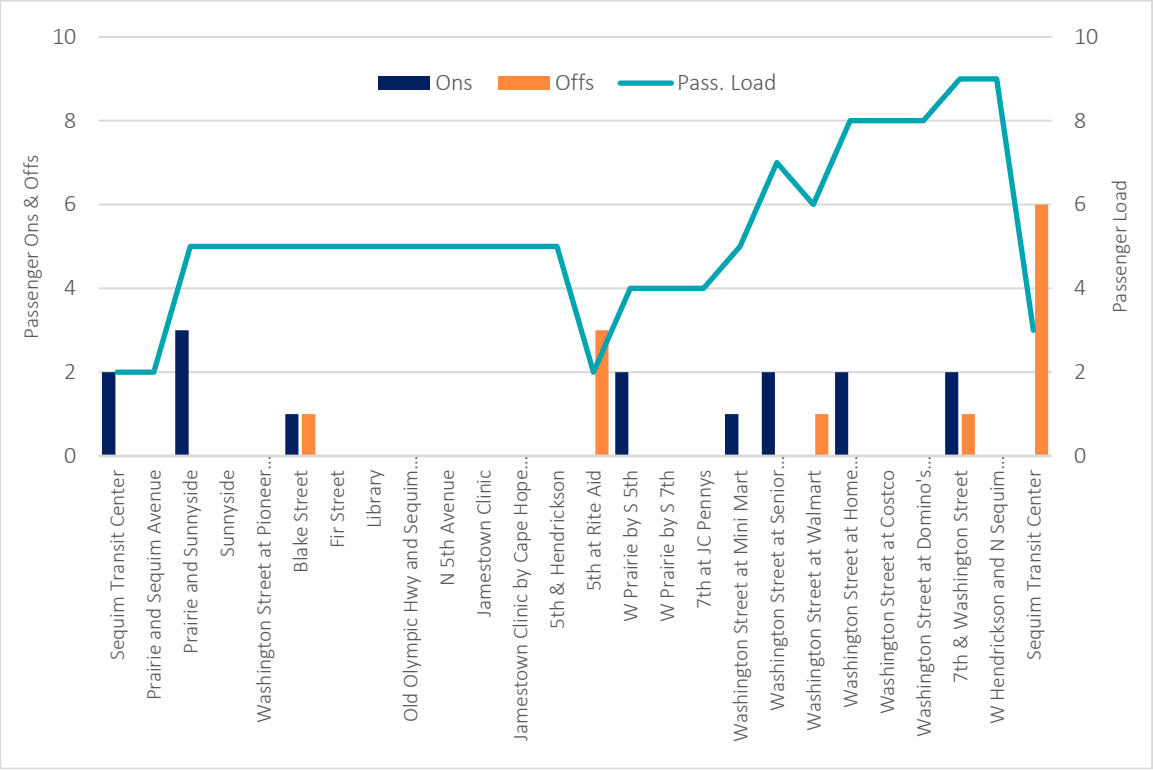
Figure 52: Route 40 – Weekday Ons and Offs Activity per Stop

Note: The circle representing the daily "ons" and "offs" in the legend is a proportional symbol. It's size on the map represents the passenger activity volume at each stop, both daily ons and offs per stop, and the size of the symbol in the legend provides a reference only. For example, the number "4" next to the circle indicates that there are 4 ons/offs, or 2 ons and 2 offs. For stops with more than 4 ons/offs, the circle will appear larger. For stops with less than 4 ons/offs, the circle will appear smaller.

Source: Walker Consultants 2021

Passenger Load Profile

Figure 53: Counter-Clockwise to Walmart/Costco



Source: Walker Consultants 2021

Service Performance

- Productivity Indicators (2019)
  - Weekday boardings = 44
  - Passengers per hour = 6.3
  - Passengers per trip = 2.5
  - Average trip length (miles) = 3.4
- Efficiency Indicators (2019)
  - Cost per Boarding = $23.9
  - Cost per Passenger Mile = $7.0
  - Revenue per Passenger Mile = $0.29
  - Farebox Recovery Ratio = 4.2%
- Service Trips On-Time Performance (February 2021)
  - Early (< 0 mins.) = 77.8%
  - On-time (0 to 5 mins.) = 22.2%
  - Late (> 5 mins.) = 0.0%

Strengths and Opportunities for Improvement

Key Service Design Issues

- Confusing loop route (a mix of a loop and a figure eight) that it is inconvenient for trips away from Washington St.
- It takes 35 minutes to complete the full loop, however service trips are provided every 45 and 90 minutes.
- The gaps in service are because the route shares its vehicle with Routes 50 – Jamestown Campus and Route 52 – Diamond Point.

Service Change Recommendations

- Decouple the vehicle schedule from Routes 50 and 52.
- Convert route to a microtransit service and provide continuous service through the day, without gaps in the schedule.
- The current route provides service to an area of 2 square miles.
- Extend the service area to 3 square miles (for instance using Old Olympic Highway as a north boundary) and provide service pickups/wait times of not more than 20 minutes.
- This would be a great improvement to existing service.
- Operate the service from 8:30 a.m. – 8:30 p.m. if possible.
- Pilot the 3 square mile area to assess utilization, cost, and efficiency, and adjust accordingly.
- Consider replacing the Dial-A-Ride service in the Dungeness Peninsula (which covers an area of 30 square miles, 10 times bigger) if the pilot is successful.

Route 50 – Jamestown

Service Characteristics

- Route length = 7 miles
- Route variants:
  - Sequim Transit Center to Jamestown Campus
- Service hours:
  - 7:40 a.m. – 5:20 p.m. weekday
  - No service on Saturday
- Frequency:
  - 4 trips per direction
  - About 30-minute roundtrip

Ridership Activity

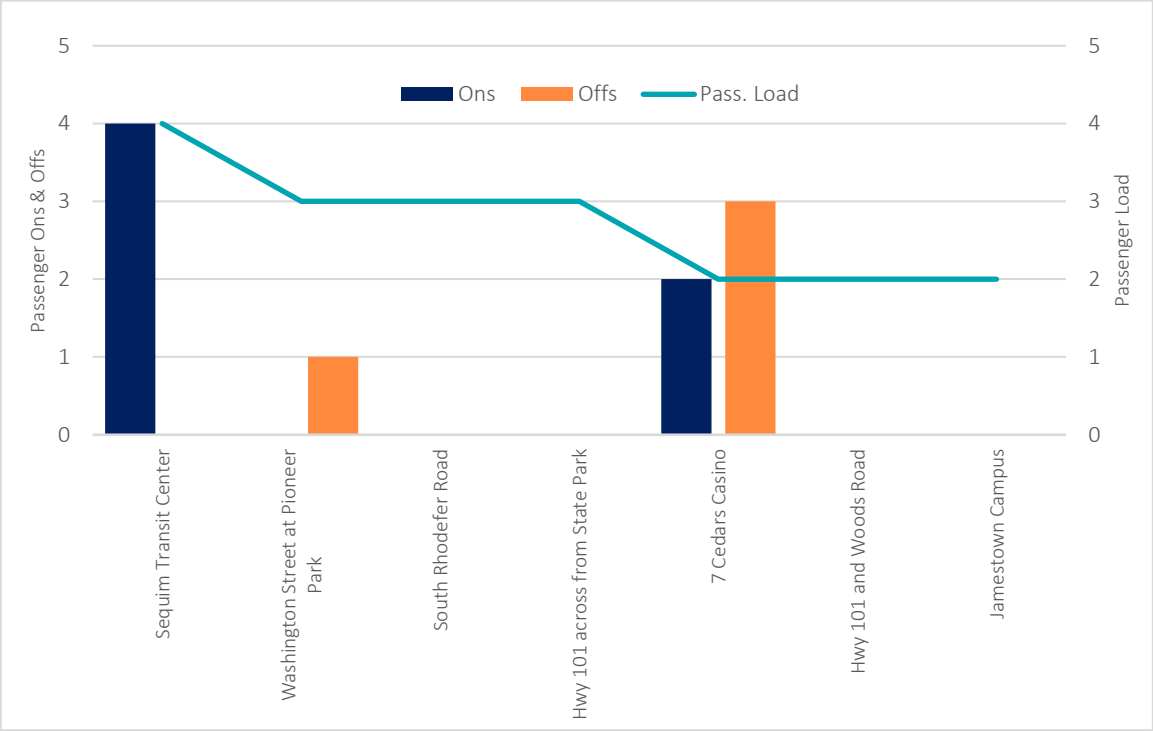
Figure 54: Route 50 – Weekday Ons and Offs Activity per Stop

Note: The circle representing the daily "ons" and "offs" in the legend is a proportional symbol. It's size on the map represents the passenger activity volume at each stop, both daily ons and offs per stop, and the size of the symbol in the legend provides a reference only. For example, the number "4" next to the circle indicates that there are 4 ons/offs, or 2 ons and 2 offs. For stops with more than 4 ons/offs, the circle will appear larger. For stops with less than 4 ons/offs, the circle will appear smaller.

Source: Walker Consultants 2021

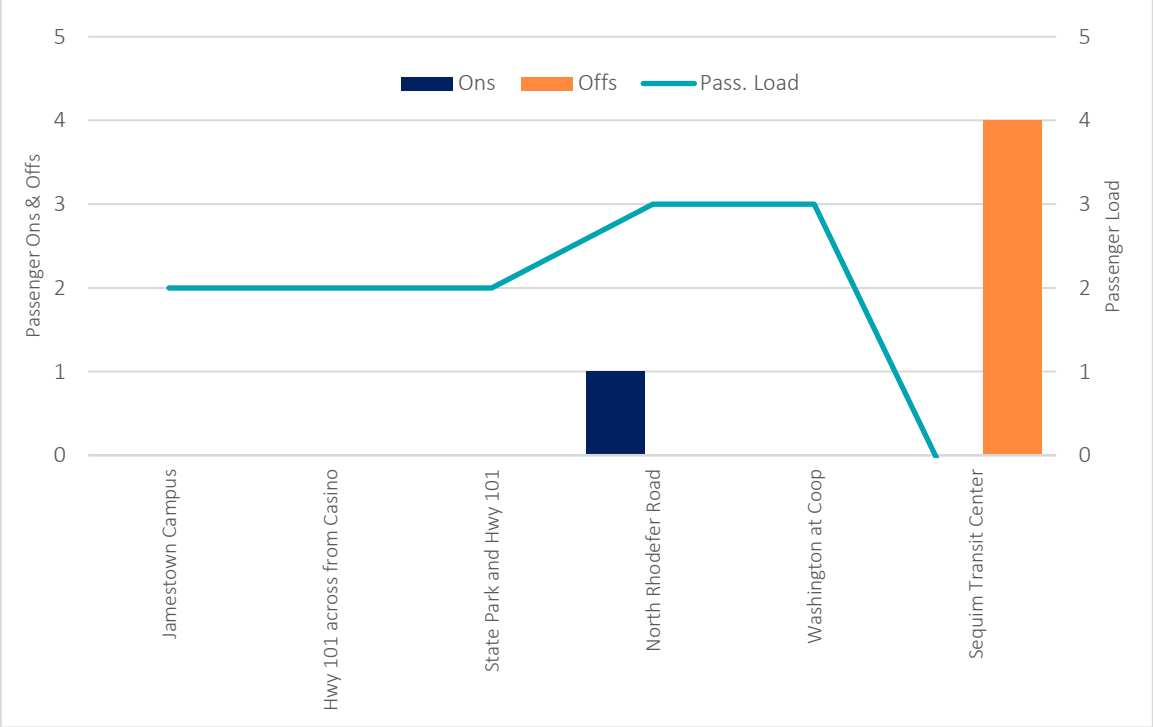
Passenger Load Profile

Figure 55: Eastbound to Jamestown Campus



Source: Walker Consultants 2021

Figure 56: Westbound to Sequim Transit Center



Source: Walker Consultants 2021

Service Performance

- Productivity Indicators (2019)
  - Weekday boardings = 15
  - Passengers per hour = 6.0
  - Passengers per trip = 1.9
  - Average trip length (miles) = 5.3
- Efficiency Indicators (2019)
  - Cost per Boarding = $27.8
  - Cost per Passenger Mile = $5.3
  - Revenue per Passenger Mile = $0.19
  - Farebox Recovery Ratio = 3.6%
- Service Trips On-Time Performance (February 2021)
  - Early (< 0 mins.) = 50.0%
  - On-time (0 to 5 mins.) = 50.0%
  - Late (> 5 mins.) = 0.0%

Strengths and Opportunities for Improvement

Key Service Design Issues

- 14-minute runtime in each direction, or 28 minutes roundtrip.
- Service trips provided every 2, 3 and 4 hours, from 7:30 a.m. to 5:30 p.m.
- Vehicle schedule interlined with Routes 40 and 52.

Service Change Recommendations

- Extend the route along Washington St to the Walmart Supercenter to increase access to destinations and avoid a transfer at the Sequim Transit Center.
- Operate the same alignment of Route 52 – Diamond Point, via W Sequim Bay Rd to increase consistency and frequency of service.
- Combine the vehicle schedule with Route 52 – Diamond Point, and also extend Route 52 to Walmart.
- The combined service can provide trips to Jamestown every 1.5 hours on either Route 50 or Route 52.
- Consider extending the service hours to at least 7:00 p.m. to provide access to Blyn, the Jamestown Campus and 7 Cedars Casino.
- Use Whitefeather Way to get to Hwy 101 and avoid the left turn from Sequim Bay to Hwy 101 (drivers' recommendation).
- Use same alignment for the return trip to Sequim to provide bi-directional service along Sequim Bay Rd and John Wayne Marina.

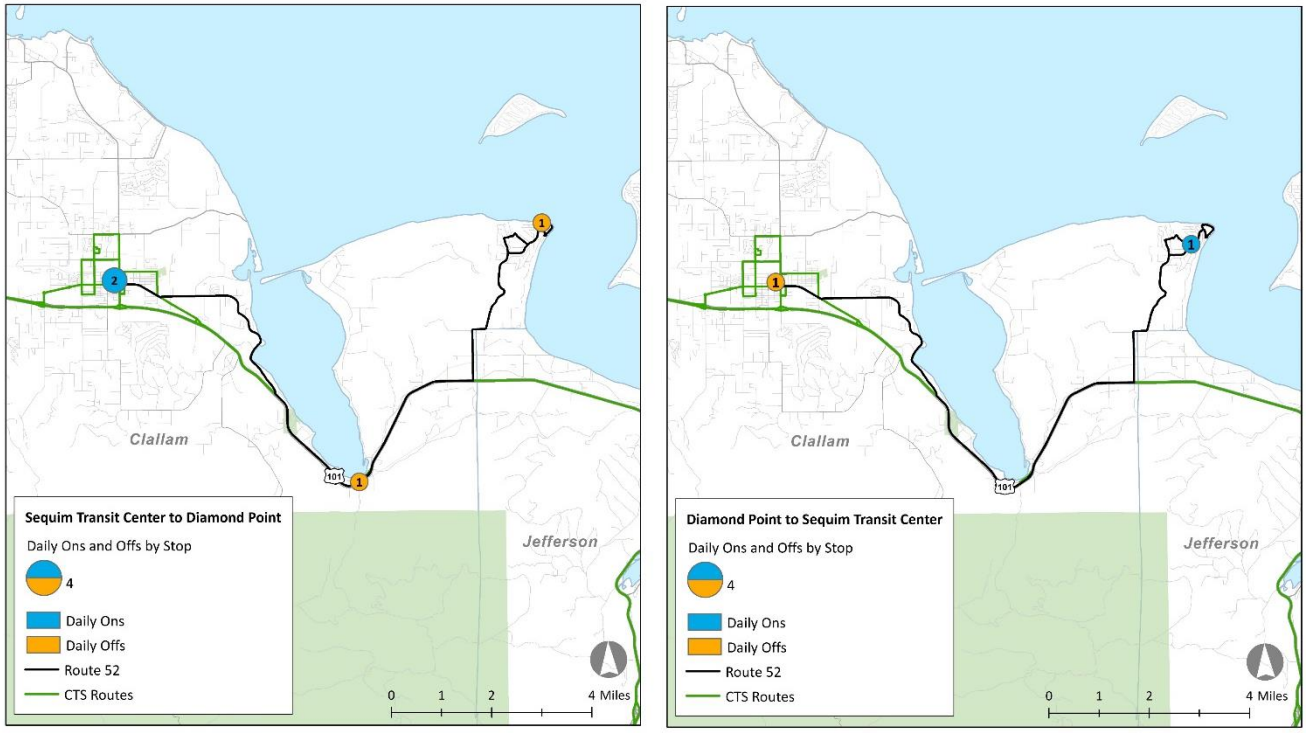
Route 52 – Diamond Point

Service Characteristics

- Route length = 14 miles
- Route variants:
  - Sequim Transit Center to Diamond Point via Sequim Bay Road
- Service hours:
  - 6:40 a.m. – 6:20 p.m. weekday
  - No service on Saturday
- Frequency:
  - 3 trips per direction
  - About 55-minute roundtrip

Ridership Activity

Figure 57: Route 52 – Weekday Ons and Offs Activity per Stop

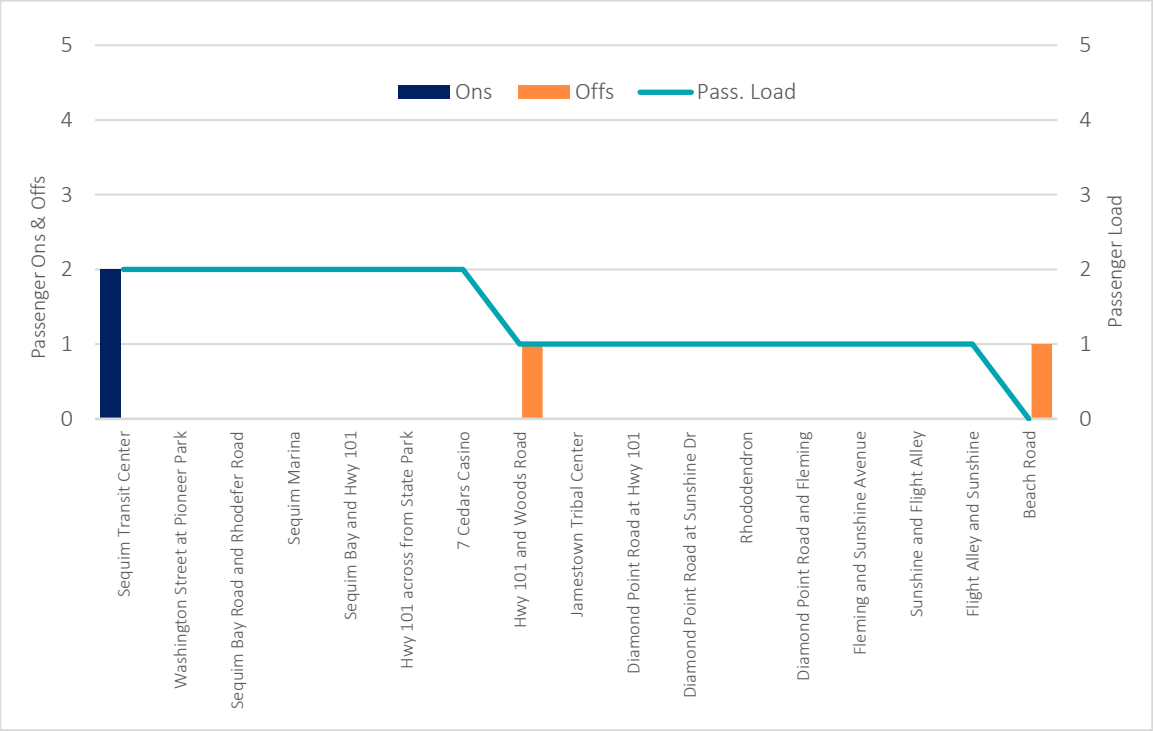


Note: The circle representing the daily "ons" and "offs" in the legend is a proportional symbol. It's size on the map represents the passenger activity volume at each stop, both daily ons and offs per stop, and the size of the symbol in the legend provides a reference only. For example, the number "4" next to the circle indicates that there are 4 ons/offs, or 2 ons and 2 offs. For stops with more than 4 ons/offs, the circle will appear larger. For stops with less than 4 ons/offs, the circle will appear smaller.

Source: Walker Consultants 2021

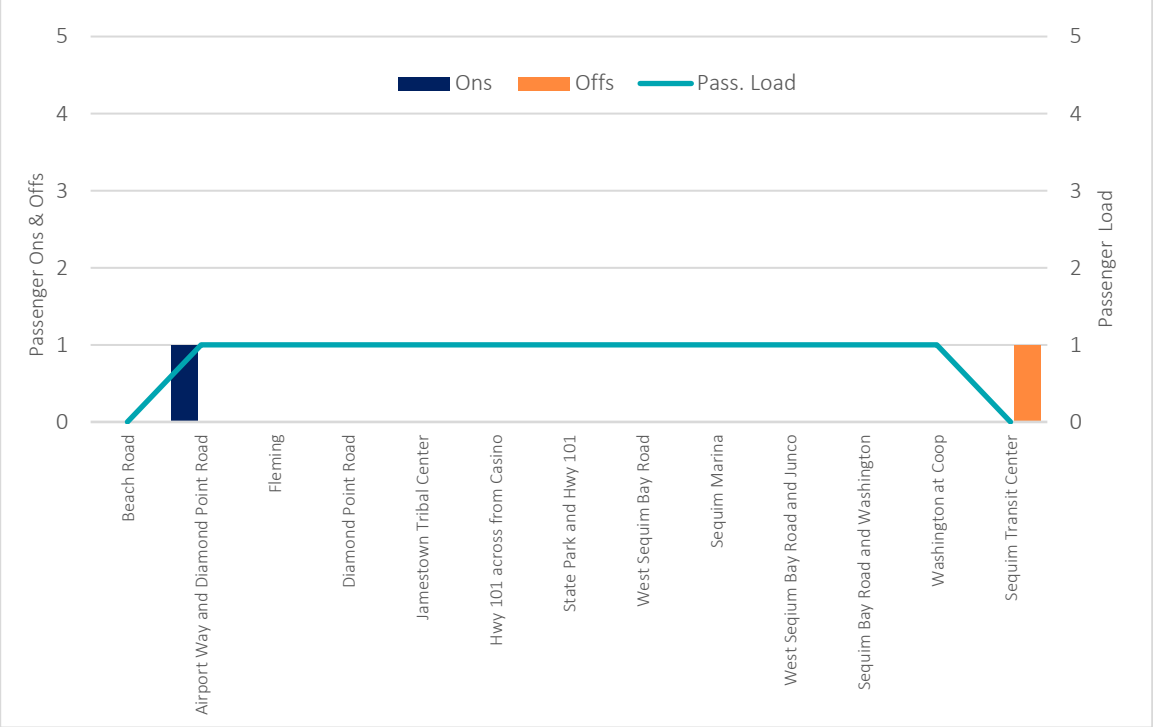
Passenger Load Profile

Figure 58: Eastbound to Diamond Point



Source: Walker Consultants 2021

Figure 59: Westbound to Sequim Transit Center



Source: Walker Consultants 2021

Service Performance

- Productivity Indicators (2019)
  - Weekday boardings = 11
  - Passengers per hour = 3.1
  - Passengers per trip = 1.9
  - Average trip length (miles) = 11.3
- Efficiency Indicators (2019)
  - Cost per Boarding = $54.0
  - Cost per Passenger Mile = $4.8
  - Revenue per Passenger Mile = $0.09
  - Farebox Recovery Ratio = 1.9%
- Service Trips On-Time Performance (February 2021)
  - Early (< 0 mins.) = 16.7%
  - On-time (0 to 5 mins.) = 83.3%
  - Late (> 5 mins.) = 0.0%

Strengths and Opportunities for Improvement

Key Service Design Issues

- 28-minute runtime in each direction, or 56 minutes roundtrip.
- Service trips provided every 5 hours, between 6:30 a.m. and 6:30 p.m.
- Vehicle schedule interlined with Routes 40 and Route 50.

Service Change Recommendations

- Extend the route along Washington St to the Sequim Walmart Supercenter to increase access to destinations and avoid a transfer at the Sequim Transit Center. This will increase utility of route and access to destinations for residents of Diamond Point.
- Follow the same alignment recommended for Route 50 to simplify service, ease of use, and increase trip opportunities and service frequency.
- A combined vehicle schedule and operation with Route 50 – Jamestown Campus, can provide service to Diamond Point every 3 hours.
- Consider adding a new trip later in the evening.
- Consider operation of both Routes 50 and 52 on Saturday.

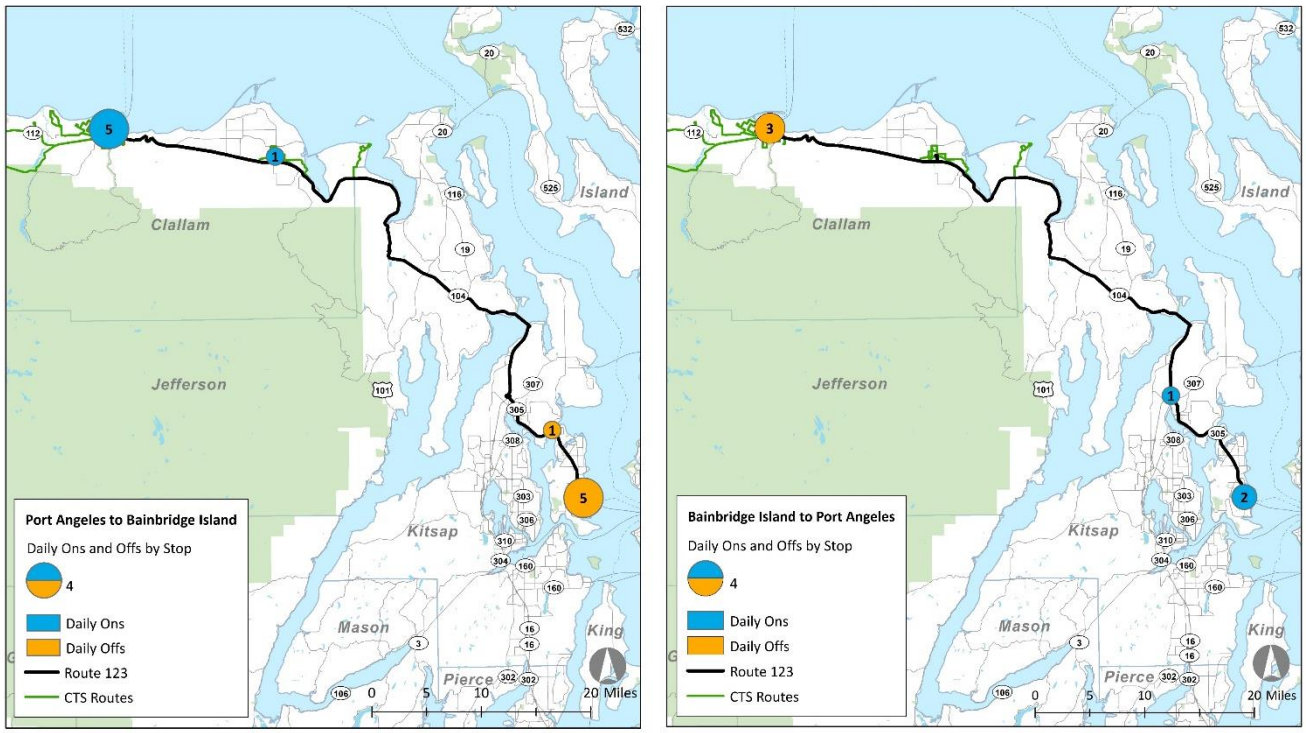
Route 123 – The Straight Shot

Service Characteristics

- Route length = 73 miles
- Route variants:
  - Gateway Transit Center (GTC) to Bainbridge Island Ferry Terminal via North Viking Transit Center
- Service hours & frequency:
  - 2 trips per direction, 7:25 a.m. & 6:00 p.m. from GTC, weekday
  - 2 trips per direction 7:25 a.m. & 4:15 p.m. from GTC, Saturday
  - 1 trip per direction, 3:15 p.m. from GTC, Sunday
  - About 2-hour trip each way

Ridership Activity

Figure 60: Route 123 – Weekday Ons and Offs Activity per Stop

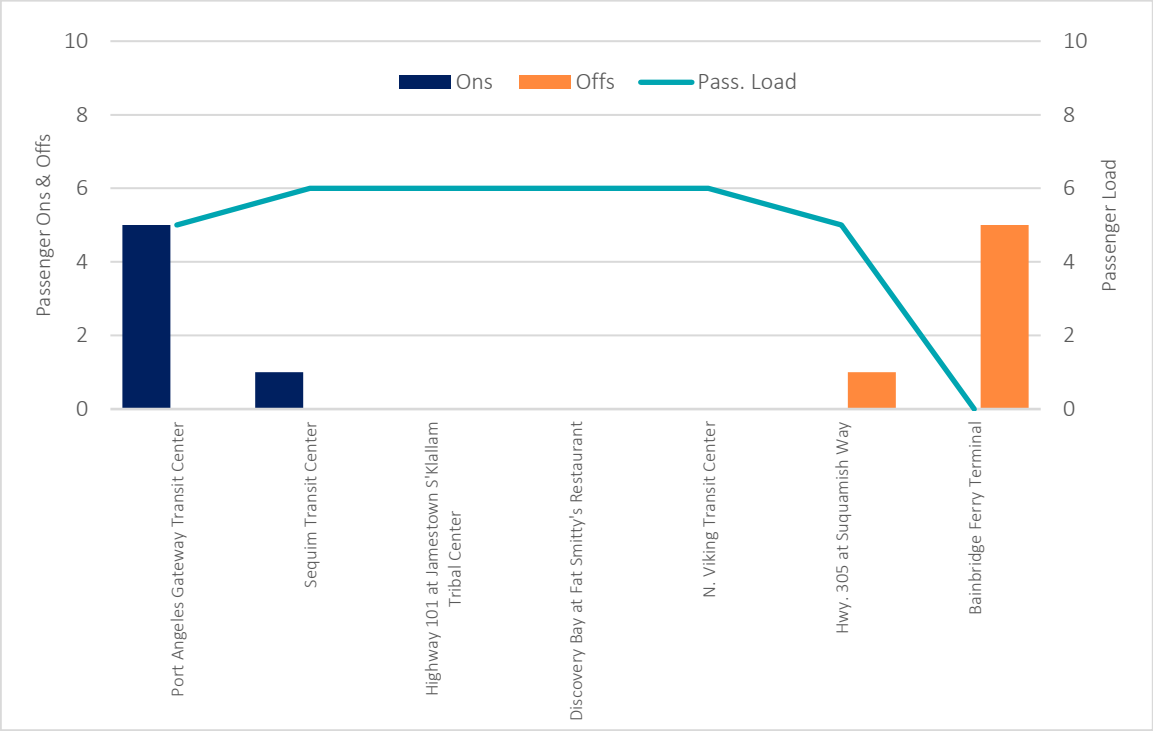


Note: The circle representing the daily "ons" and "offs" in the legend is a proportional symbol. It's size on the map represents the passenger activity volume at each stop, both daily ons and offs per stop, and the size of the symbol in the legend provides a reference only. For example, the number "4" next to the circle indicates that there are 4 ons/offs, or 2 ons and 2 offs. For stops with more than 4 ons/offs, the circle will appear larger. For stops with less than 4 ons/offs, the circle will appear smaller.

Source: Walker Consultants 2021

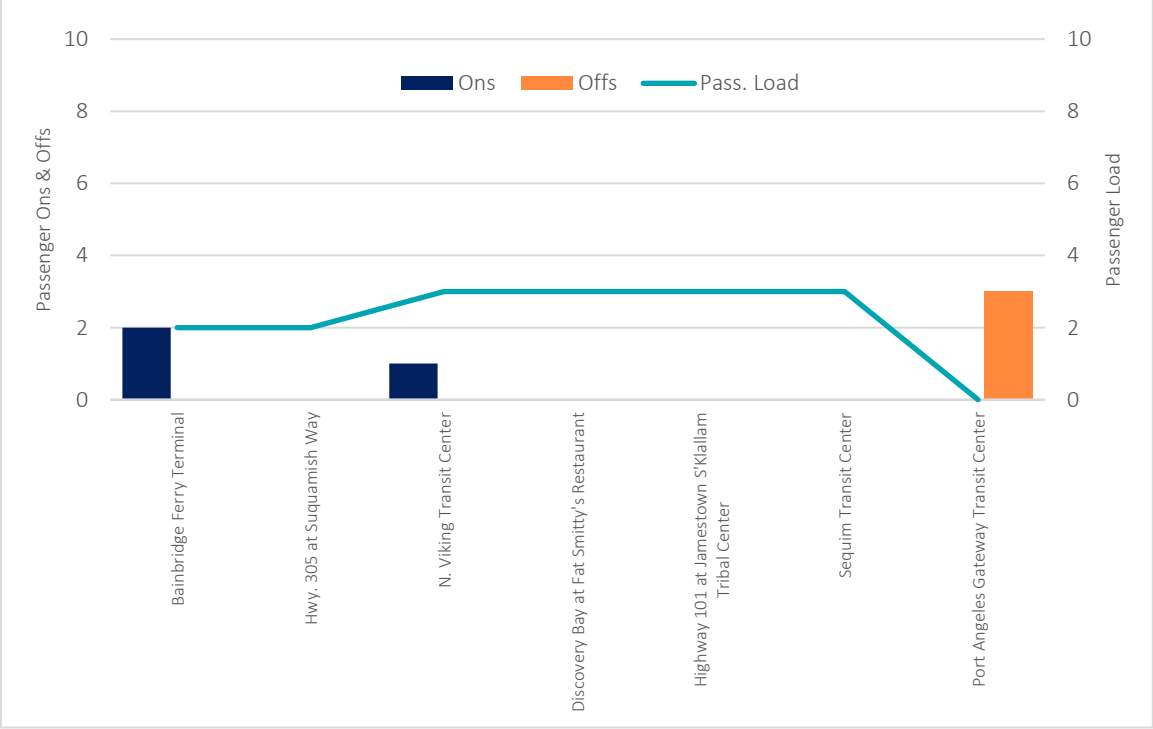
Passenger Load Profile

Figure 61: Southbound to Poulsbo/Bainbridge Ferry Terminal



Source: Walker Consultants 2021

Figure 62: Northbound to Port Angeles/Gateway Transit Center



Source: Walker Consultants 2021

Service Performance

- Productivity Indicators (2019)
  - Weekday boardings = 51
  - Passengers per hour = 5.0
  - Passengers per trip = 12.8
  - Average trip length (miles) = 61.0
- Efficiency Indicators (2019)
  - Cost per Boarding = $35.3
  - Cost per Passenger Mile = $0.6
  - Revenue per Passenger Mile = $0.16
  - Farebox Recovery Ratio = 28.3%
- Service Trips On-Time Performance (February 2021)
  - Early (< 0 mins.) = 75.0%
  - On-time (0 to 5 mins.) = 0.0%
  - Late (> 5 mins.) = 25.0%

Strengths and Opportunities for Improvement

Key Service Design Issues

- 2-hour runtime per direction
- Morning trip scheduled to meet:
  - 9:20 and 10:10 a.m. ferry arrivals from Seattle (55-min layover)
  - 9:40 a.m. departure from Bainbridge Island
- Evening trip scheduled to meet:
  - 7:30 p.m. ferry arrival from Seattle (25-minute layover)
  - 8:20 p.m. departure from Bainbridge Island
- Stop at North Viking TC in Poulsbo:
  - Connections with Kitsap Transit

Service Change Recommendations

- Add a third roundtrip in the midday (on weekdays and Saturdays) to meet:
  - 2:40 p.m. ferry arrival from Seattle
  - 2:55 p.m. departure from Bainbridge Island
  - Coho Ferry 12:00 p.m. arrival and 5:15 p.m. departure
- Morning trip on Sunday to meet:
  - 10:10 a.m. ferry arrival from Seattle
  - 10:25 a.m. departure from Bainbridge Island
- Both the third daily trip and the Sunday morning trip have already been approved and funded by Clallam Transit. They will be implemented in September of 2021.

5. Service Recommendations

5. Service Recommendations

The market analysis, community survey and stakeholders' meetings show that mobility needs and demands for additional transit service are much greater than the funding that CTS has currently available for investment in new service. However, there are four strategic changes that CTS can make to address unmet needs and demands, these include:

1. CTS can make strategic changes in the design of its service by making sure routes are reaching major travel destinations and following consistent alignment patterns, to help build frequency and span of service along major travel corridors. Avoiding the over-specialization of services and route alignments, helps increasing the accessibility and usability of service for everyone, from multiple market segments and for multiple travel purposes.
2. CTS can make strategic changes in the design of its service by making sure routes are connecting efficiently at key decision points to travel across urban areas and across the region.
3. CTS can increase the efficiency of its service by making sure its vehicles are not idling for more than 20 percent of time. The current average for the system is 25 percent, which means that for every hour of service, vehicles are sitting for 15 minutes. Transit service best practice suggests reducing this number to at most 10 minutes per hour, or 20 percent of time. CTS can accomplish this by revising its blocking of vehicles (or scheduling) and its drivers' work assignments (or runcutting).
4. Finally, CTS can make strategic investments in additional service, in the form of additional frequency of service and/or extended hours of service, to increase the convenience and reliability of service.

Implementation of these strategies will help CTS refresh its service and bring back and attract new riders into the system to increase ridership, revenue, and financial performance.

Network Design and Service Goals

The first two service change strategies can be accomplished by making changes to the design of routes, including alignment, start and end points, service frequency and hours of service. Based on the existing conditions and route-by-route performance analysis, this plan establishes the following design goals for the CTS network:

- Provide better connections between inter-city routes to allow for cross-county trips.
- Provide cross-town services in Port Angeles and Sequim to reach destinations more effectively.
- Provide better frequency of service on major corridors, such as:
    - Front Street / 1st Street and Hwy 101 in Port Angeles and East Port Angeles
    - 8th Street and Lincoln Street in Port Angeles
    - Hwy 101 / Olympic Hwy in West Port Angeles
- Adjust route alignments to provide simpler and direct routes that allow for convenient and consistent travel in both directions, for instance reducing loops and off-route deviations.
- Provide continuous service schedules, add missing trips and fill in schedule gaps.
- Provide regular (clockface) service headways on rural and intercity routes to facilitate trip planning
- Provided extended service hours in the evening, on all routes if possible.

- Replace complicated shuttle loops, in low density and low demand areas such as Forks and Sequim, with on-demand shared-ride services (microtransit service).
- Increase service hours on Saturday to match weekday service, and
- Provide service on Sunday.

Service Changes

The following is a summary of the service changes that are recommended for each route, in an unconstrained funding scenario, including changes in service operation for the Forks and Sequim Shuttles, and addition of two new routes – Lower Elwha and East Port Angeles:

Table 15: Service Change Recommendations

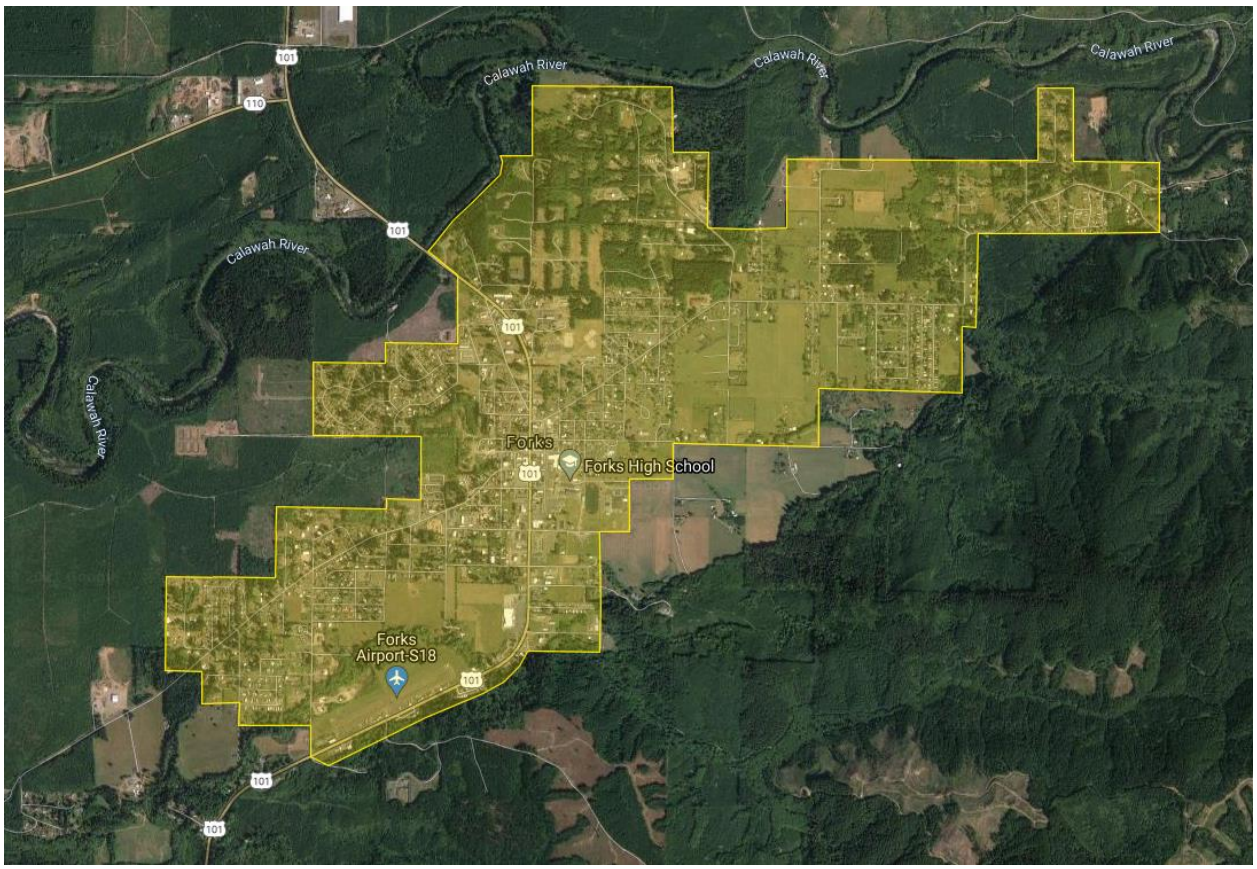
Route Name	Service Recommendations
Route 10 – Joyce	No changes in route alignment, and no changes in number of trips. Interline with New Route 12 – Lower Elwha and extend trips to East Port Angeles as New Route 28.
NEW Route 12 – Lower Elwha	New Route 12 to Lower Elwha via Lincoln, Olympic Hwy and Laird's Corner (see Figure 63). Interline with Route 10 and extend trips to East Port Angeles as New Route 28.
Route 14 – Forks	Change schedule times to every 2 hours. Extend trips to East Port Angeles, as New Route 28.
Route 15 – La Push	No changes to route alignment. Change trip times to interline with Route 16 and time connections with Route 14 at Forks.
Route 16 – Neah Bay	No changes to route alignment. Eliminate one round trip and reallocate time to other higher performing services. Interline with Route 15 and time connections with Route 14 at Forks.
Route 17 – Forks Microtransit	Change shuttle operation to on-demand microtransit operation. Provide continuous service from 8:00 a.m. to 6:00 p.m. on a 3 sq. mile area (see Figure 64).
Route 20 – Peninsula College	Redesign to operate a single alignment (no loop) between Gateway, 8th Street, Lauridsen, Peninsula College and Melody Lane (see Figure 66). Extend service to 10:00 p.m.
Route 22 – Port Angeles High School	Redesign to operate a single alignment (no loop) connecting the Port Angeles High School, Saar's Foods, North Olympic Library, with the Olympic Medical Center and Gateway Transit Center (see Figure 65). Extend service to 9:00 p.m.
Route 24 – Cherry Hill	Modify to run bi-directionally along W 8th Street (see Figure 65). Keep running until 10:00 p.m.
Route 26 – West Side	Redesign to operate on a single alignment along 18th St, Lauridsen, C St, 8th St and Lincoln St, connecting the Gateway Transit Center with the Fairgrounds and Serenity House (see Figure 66).
NEW Route 28 – East Port Angeles	New Route 28 to East Port Angeles, from Gateway Transit Center to Deer Park Park & Ride. Operate as overlay to Route 30 to increase frequency along the corridor (see Figure 67). Interline with Routes 10, 12 and 14.
Route 30 – Hwy 101 Commuter	Eliminate deviation through Deer Park Park & Ride. Increase 30-minute frequency until 9:00 p.m.
Route 40 – Sequim Microtransit	Change shuttle operation to on-demand microtransit operation. Provide continuous service from 8:00 a.m. to 6:00 p.m. on a 3 sq. mile area (see Figure 69).
Route 50 – Jamestown Campus	Extend route to Walmart. Consolidate alignment with Route 52 to increase frequency and consistency of service. Connect with Hwy 101 at Whitefeather Way. See Figure 70.
Route 52 – Diamond Point	Extend route to Walmart. Interline with Route 50 to increase frequency and consistency of service. Connect with Hwy 101 at Whitefeather Way. See Figure 70.
Route 123 – The Strait Shot	Add third round trip on weekdays and Saturdays. Add morning round trip on Sundays.

Source: Walker Consultants 2021

Figure 63: Service Recommendations for Lower Elwha – New Route 12

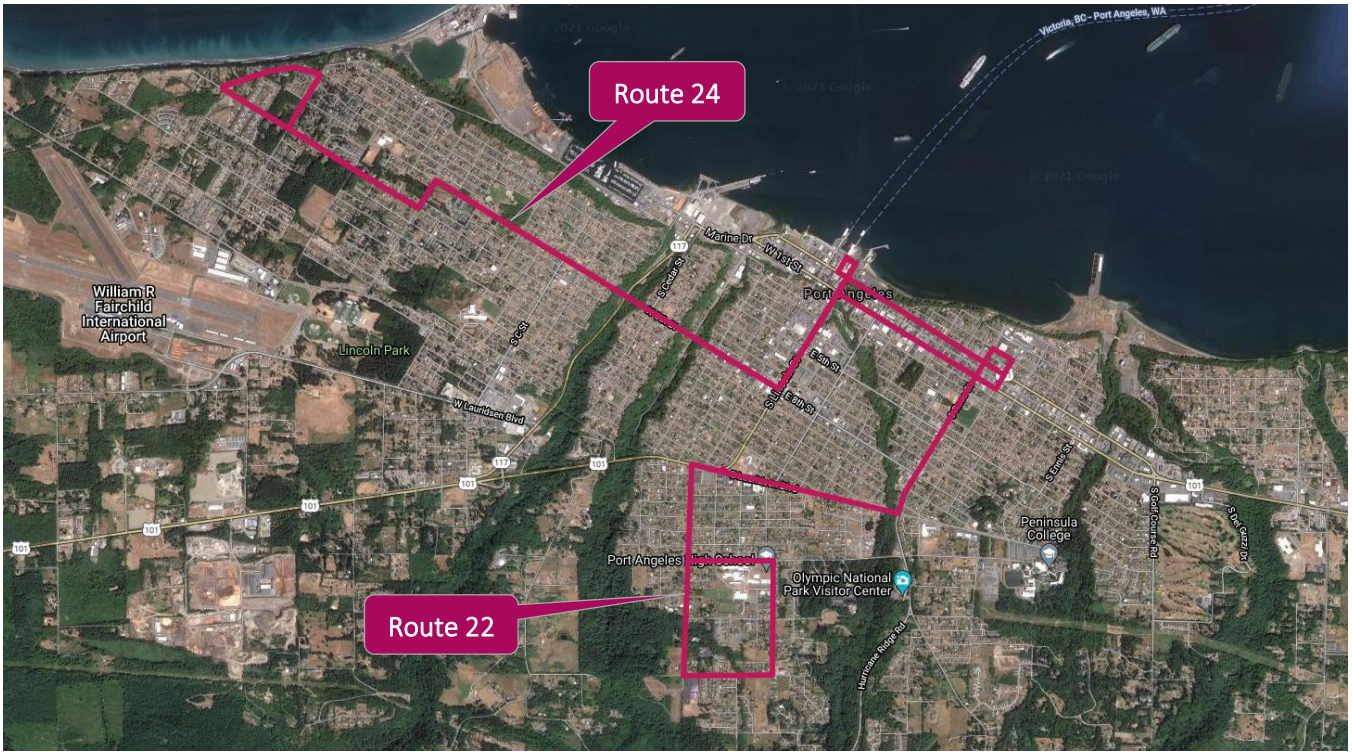
Source: Walker Consultants 2021

Figure 64: Forks Microtransit Service Area Example (3 Sq. Miles)



Source: Walker Consultants 2021

Figure 65: Routes 22 and 24 Alignment Recommendations – PA Crosstown Route 1



Source: Walker Consultants 2021

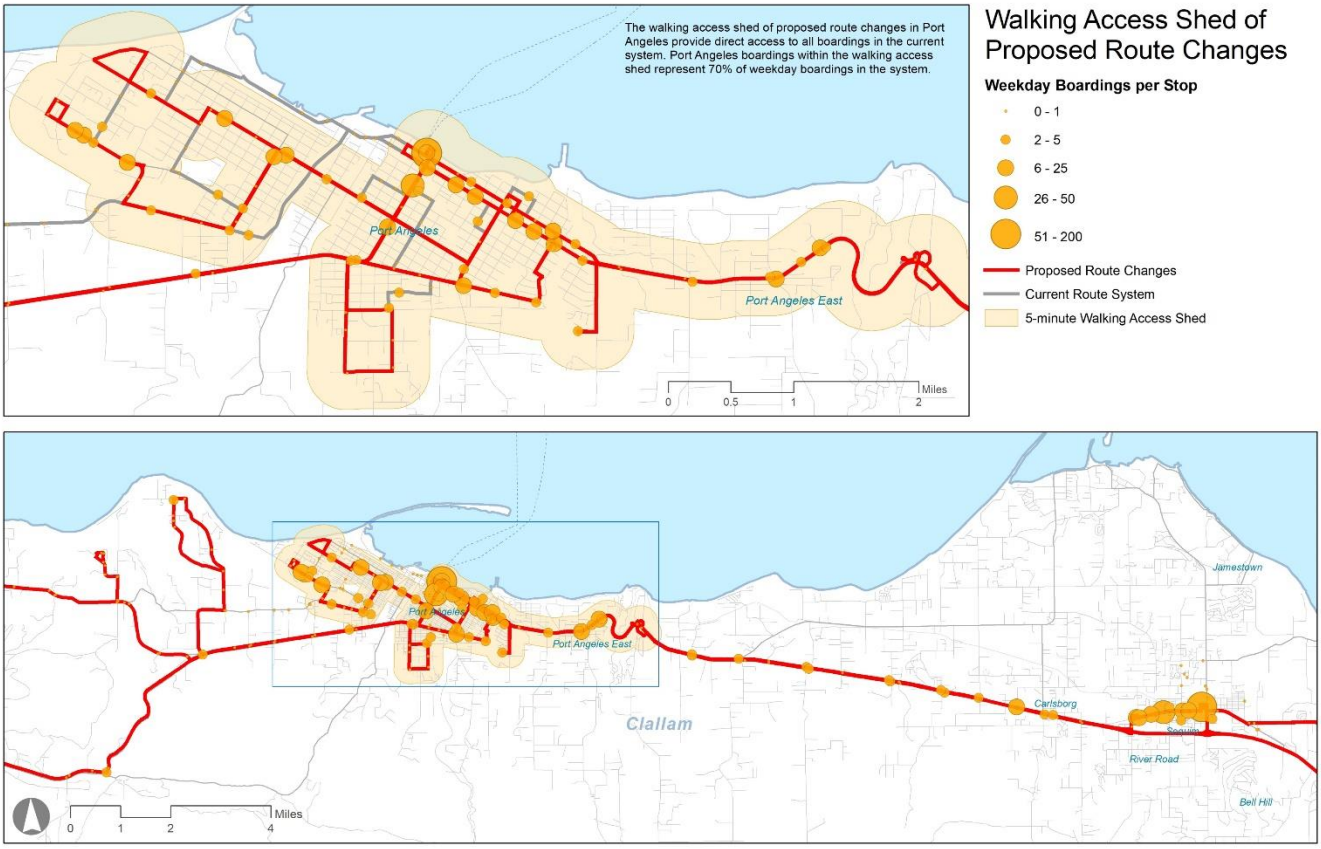
Figure 66: Routes 20 and 26 Alignment Recommendations – PA Crosstown Route 2

Source: Walker Consultants 2021

Figure 67: Alignment Recommendation for East Port Angeles Overlay – New Route 28

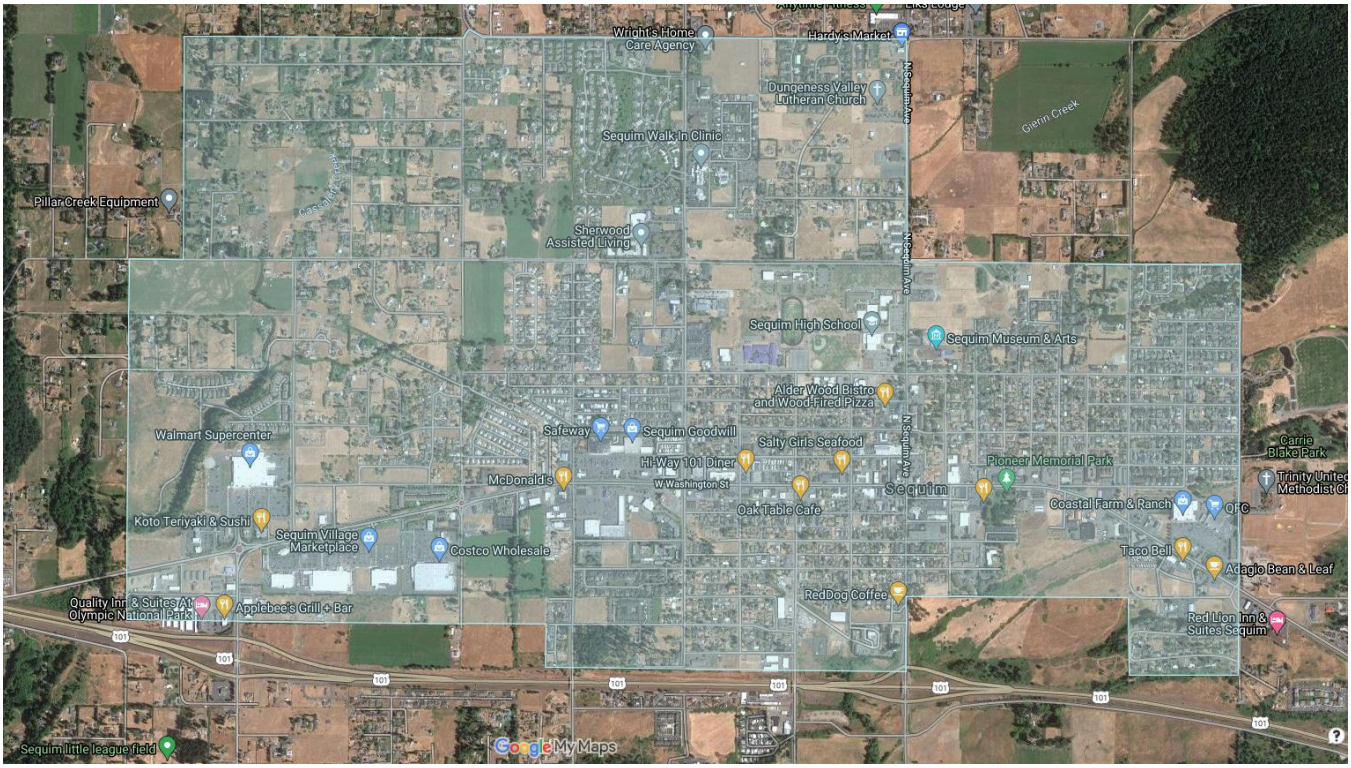
Source: Walker Consultants 2021

Figure 68: Walking Access and Coverage of Proposed Changes to Port Angeles Routes



Source: Walker Consultants 2021

Figure 69: Sequim Microtransit Service Area Example (3 Sq. Miles)



Source: Walker Consultants 2021

Figure 70: Routes 50 and 52 Alignment Recommendations

Source: Walker Consultants 2021

Crosstown Services

Although Routes 20, 22, 24 and 26 in Port Angeles are the best performing routes in the system in terms of passengers per hour, fare recovery ratio and cost per passenger, they are also the routes with the greatest potential to grow new ridership. As many as 50 percent of their boardings are passengers transferring at the Gateway Transit Center between Port Angeles routes to access Safeway, the Civic Center, and other destinations along Lincoln St, and/or transfers between Route 30 – Hwy 101 Commuter and the Port Angeles routes.

All Port Angeles routes are designed as short loops that meet at the Gateway Transit Center every 30 minutes. However, several routes can complete their loops in less than 20 minutes, which means that transferring passengers wait at the transit center for about 10 minutes, a significant portion of their trip. This adds great inconvenience and likely reduces the utility of the routes for most potential users.

Many survey respondents, stakeholders and drivers indicated the need for crosstown services in Port Angeles. Therefore, service recommendations for Routes 20, 22, 24 and 26 include changes to the design of routes to operate as single alignments where riders can travel in both directions and reach all destinations along the route efficiently.

Figure 65 and Figure 66 show the alignment recommendations for Routes 20, 22, 24 and 26 in Port Angeles. They also show two route combinations or Crosstown Routes. Crosstown Route 1 is a combination of Routes 22 and 24, and Crosstown Route 2 is a combination of Roues 20 and 26. The two crosstown combinations provide service from the west side to the east side of Port Angeles, traveling along Lincoln Street and the Gateway Transit Center.

The idea is to stagger the schedules of the crosstown routes, so that they provide service every 15 minutes along the segments where they overlap – Lincoln and 8th Streets.

Implementation of the new Route 28 – East Port Angeles would provide an overlay to Route 30 – Hwy 101 Commuter, and a 15-minute frequency of service along the segment of most demand, between the Gateway Transit Center and Walmart. The two crosstown routes would connect with either Route 28 or 30 and provide a service frequency of 15 minutes along Lincoln St, Front St / 1st St and Hwy 101.

Figure 68 shows the resulting network of services in the Port Angeles area and their coverage of existing stops, riders, and market. The recommended changes in design and alignment would provide access to all existing riders within a 5-minute walk to the nearest stop. Currently, this area represents 70 percent of the daily ridership in the system. Therefore, improving the design of service, the frequency of service and the hours of service will likely result in additional ridership for the system, in the form of both new riders and more frequent riders.

Service Scenarios

The service changes were recommended under an unconstrained funding scenario, to develop a long-term vision for the system. The comprehensive operational analysis provides a short-term five-year plan for service that is constrained by the current financial situation. The financial analysis in Chapter 2 shows that CTS can make a modest investment of up to $1 million (or 17% increase) in additional service in the next five years.

This plan proposes three service scenarios – conservative, moderate, and aggressive, to provide a phased and prioritized implementation of service changes. Each service scenario represents an incremental investment of 5 percent in additional service, from current levels of service.

Conservative Scenario

The Conservative Scenario proposes a 5 percent increase in vehicle service hours and a 12 percent increase in vehicle service miles, for an additional $300,000 in operational costs per year. The additional service miles are the result of investing additional service hours in urban routes that provide more service trips and miles per hour, and frequency of service. This scenario:

- Modifies Port Angeles routes to operate single route alignments in both directions of travel and creates crosstown connections that avoid transfers.
- Eliminates loop operations which are not providing direct and efficient connections between major destinations.
- Adds missing trips in urban routes' schedules to provide and maintain consistent frequency of service throughout the day.
- Reduces vehicles' idle time from current average of 34% to 27% of runtime and adds the wasted time (5% of vehicle hours) back into actual service.
- Implements new Route 12 to Lower Elwha, adding frequency on Olympic Hwy between Gateway Transit Center and Laird's Corner.
- Implements microtransit service in Forks and Sequim

Table 16: Weekdays Service Parameters – Scenario 1

Route	Name	Frequency (minutes)	Peak Vehicles	Service Roundtrips	Revenue Hours	Revenue Miles	Start Time	End Time
10	Joyce/Lyre River	120	0.9	6	11.4	289	6:00	21:00
12	Lower Elwha	120	0.5	7	6.5	136	7:00	20:00
28-A	East Port Angeles							
14	Forks	120	1.7	8	27.1	912	6:00	21:00
28-B	East Port Angeles							
15	La Push	125	0.5	3	3.2	98	7:00	18:00
16	Neah Bay	125	1.5	3	9.5	299	6:00	20:00
17	Forks Microtransit	20	1.0	20	10.0	120	8:00	18:00
20	Peninsula College	30	1.0	28	13.0	217	7:00	21:00
26	West Side	30	1.0	24	12.2	227	7:00	20:00
22	Port Angeles HS	30	1.0	24	12.2	197	7:00	20:00
24	Cherry Hill	30	1.0	28	13.0	207	7:00	21:00
30	Hwy 101 Commuter	30	3.0	28	41.5	949	6:00	22:00
40	Sequim Microtransit	20	1.0	20	10.0	120	8:00	18:00
50	Jamestown Campus	180	0.3	4	3.9	82	7:00	18:00
52	Diamond Point	180	0.5	3	4.6	109	7:00	18:00
123	The Strait Shot	300	1.0	3	14.6	448	7:00	22:00
	Subtotals		**15.9**	**209**	**192.8**	**4,410**		

Source: Walker Consultants 2021

Moderate Scenario

The Moderate Scenario proposes a 10 percent increase in vehicle service hours and a 16.5 percent increase in vehicle service miles, for an additional $600,000 in operational costs per year. This scenario includes all the service changes proposed in the Conservative Scenario, and invests additional vehicle service hours in extending the span of service of urban and commuter routes:

- It provides later evening service on all Port Angeles routes (20, 22, 24 and 26), until 9:00 and 10:00 p.m.
- It extends the 30-minute frequency of service on Route 30 – Hwy 101 Commuter, until 9:00 p.m.

Table 17: Weekdays Service Parameters – Scenario 2

Route	Name	Frequency (minutes)	Peak Vehicles	Service Roundtrips	Revenue Hours	Revenue Miles	Start Time	End Time
10	Joyce/Lyre River	120	0.9	6	11.4	289	6:00	21:00
12	Lower Elwha	120	0.5	7	6.5	136	7:00	20:00
28-A	East Port Angeles							
14	Forks	120	1.7	8	27.1	912	6:00	21:00
28-B	East Port Angeles							
15	La Push	125	0.5	3	3.2	98	7:00	18:00
16	Neah Bay	125	1.5	3	9.5	299	6:00	20:00
17	Forks Microtransit	20	1.0	20	10.0	120	8:00	18:00
20	Peninsula College	30	1.0	**30**	**14.0**	**233**	**7:00**	**22:00**
26	West Side	30	1.0	**28**	**14.2**	**264**	**7:00**	**21:00**
22	Port Angeles HS	30	1.0	**28**	**14.2**	**230**	**7:00**	**21:00**
24	Cherry Hill	30	1.0	**30**	**14.0**	**222**	**7:00**	**22:00**
30	Hwy 101 Commuter	30	3.0	**30**	**44.5**	**1,017**	**6:00**	**22:00**
40	Sequim Microtransit	20	1.0	20	10.0	120	8:00	18:00
50	Jamestown Campus	180	0.3	4	3.9	82	7:00	18:00
52	Diamond Point	180	0.5	3	4.6	109	7:00	18:00
123	The Strait Shot	300	1.0	3	14.6	448	7:00	22:00
	Subtotals		**15.9**	**223**	**201.7**	**4,579**		

Source: Walker Consultants 2021

Aggressive Scenario

The Aggressive Scenario proposes a 15 percent increase in vehicle service hours and a 21 percent increase in vehicle service miles, for an additional $900,000 in operational costs per year. This scenario includes all the service changes proposed in the Conservative and Moderate Scenarios, and invests additional vehicle service hours in additional service frequency along the 1st St / Front St and Hwy 101 corridor:

- Implements Route 28 East Port Angeles, providing overlay service to Route 30 between Gateway TC and Deer Park Park & Ride.
- Operate Route 28 as a standalone service or as an extension of Routes 10 Joyce, Route 12 Lower Elwha, and Route 14 Forks, to provide direct connection to East Port Angeles employment and shopping opportunities for residents of rural and tribal communities west of Port Angeles.

Table 18: Weekdays Service Parameters – Scenario 3

Route	Name	Frequency (minutes)	Peak Vehicles	Service Roundtrips	Revenue Hours	Revenue Miles	Start Time	End Time
10	Joyce/Lyre River	120	0.9	6	11.4	289	6:00	21:00
12	Lower Elwha	120	0.5	7	6.5	136	7:00	20:00
28-A	East Port Angeles	**60**	**0.6**	**7**	**4.4**	**80**	**7:00**	**20:00**
14	Forks	120	1.7	8	27.1	912	6:00	21:00
28-B	East Port Angeles	**120**	**0.3**	**8**	**5.1**	**91**	**6:00**	**21:00**
15	La Push	125	0.5	3	3.2	98	7:00	18:00
16	Neah Bay	125	1.5	3	9.5	299	6:00	20:00
17	Forks Microtransit	20	1.0	20	10.0	120	8:00	18:00
20	Peninsula College	30	1.0	30	14.0	233	7:00	22:00
26	West Side	30	1.0	28	14.2	264	7:00	21:00
22	Port Angeles HS	30	1.0	28	14.2	230	7:00	21:00
24	Cherry Hill	30	1.0	30	14.0	222	7:00	22:00
30	Hwy 101 Commuter	30	3.0	30	44.5	1,017	6:00	22:00
40	Sequim Microtransit	20	1.0	20	10.0	120	8:00	18:00
50	Jamestown Campus	180	0.3	4	3.9	82	7:00	18:00
52	Diamond Point	180	0.5	3	4.6	109	7:00	18:00
123	The Strait Shot	300	1.0	3	14.6	448	7:00	22:00
	Subtotals		**16.8**	**238**	**211.2**	**4,750**		

Source: Walker Consultants 2021

Additional Service Funding

The service scenarios show that an investment of $1 million in additional service can only go so far and will not be able to meet some key service priorities requested by the community such as extended service on Saturday and Sunday service. The service needs are much greater than what current funding allows CTS to provide. CTS can pursue four funding strategies to pay for increases in service, as recommended in the service scenarios and beyond, these strategies include:

1. Funding Reserves: Investing up to $1,000,000 of projected reserves into additional service, per year. This has been included in the service scenarios recommended by this plan.
2. Service Scheduling Efficiencies: Reducing vehicle idle time from 25 to 20 percent of all total vehicle hours would recoup up to 5 percent in operating costs that can be re-invested for no additional cost. This can be accomplished by efficiencies in the design of routes and the scheduling of vehicles and drivers' assignments. This plan recommends a detail revision of all route schedules, vehicle blocks and drivers' assignments in order to increase efficiencies.
3. Revisions to Fare Structure: the fare analysis in Chapter 4 shows that the current fare structure of rural and intercity routes is collecting much less per passenger mile than urban routes. Urban routes are subsidizing the rest of the system. Increasing the average revenue per passenger mile from $0.14 to $0.20 across all routes would generate up to a 5 percent increase in farebox revenue for the system (an increase from 12 to 17% in the farebox recovery ratio). An example of what the fare structure may look like to achieve this goal is provided below. This is a strategy for further consideration.
4. Increasing Sales Tax Collection: Clallam Transit has authority to collect 0.9 percent of sales tax. It currently collects 0.6 percent only, therefore it has authority to collect an additional 0.3 percent. Each 0.1 percent equals about $1.4 million. So, an additional 0.3 percent could provide the system with about $4 million per year. This change requires approval from the voters and a more specific plan to explain how the money would be invested and why.

Fare Policy Changes

Clallam Transit last changed its fare structure in July of 2014. Changes in the design of service and the post-pandemic recovery may be an opportunity to revisit the fare structure with the seemingly contradictory purpose of raising additional revenue and increasing fairness. The current fare structure is collecting less than 10 cents per passenger mile on rural and intercity routes and close to 30 cents per passenger mile on urban and circulator routes. Rural and intercity routes are important services that Clallam Transit is committed to provide, but they are also very expensive services to provide that consume two-thirds (67%) of the system operating costs. It is not only fair and reasonable to expect a higher level of revenue from these routes, but also financially sound to maintain CTS's ability to provide transit services in the future.

A reasonable goal is to recover an additional 5 percent points in farebox revenue. This can be achieved with slight changes to the fare structure that will still make the system affordable for everyone. The current farebox recovery ratio is low at 11.7 percent[4]. A 17 percent farebox recovery ratio could be achieved with changes in fares that reflect the cost of operating long-distance services or a system of zones.

[4] Accounting for full fare payment per passenger and no discounts.

For example:

- $1.00 single ride for routes up to 10 miles in length (Routes 17, 20, 22, 24, 26, 40 and 50).
- $2.00 single ride for routes between 10 and 30 miles in length (Routes 10, 15, 30 and 52).
- $3.00 single ride for routes longer than 30 miles in length (Routes 14 and 16).
- $10.00 single ride for trips on the Straight Shot (over 60 miles in length). Same as today.

This change has the potential to increase the farebox recovery ratio up to 17 percent and generate an average revenue of 20 cents per passenger mile across the system. In essence, the example explores changes in the fare structure that more closely align with the cost of operating existing urban/circulator, rural and intercity route services.

An important benefit of setting an appropriate fare structure is that it also sets the framework for the paratransit service fares. ADA complimentary paratransit within three-quarters of a mile of fixed-route service can be provided for a fare that is not more than twice the fare that would be charged to an individual paying full fare for a trip of similar length, at a similar time of day, on the entity's fixed route system, exclusive of discounts.[5]

For instance, CTS could choose to charge twice the regular fare for paratransit service trips within the ADA complimentary service area and a premium fare for paratransit trips beyond the three-quarters of a mile area. This would not only be fair and correct but would also provide the appropriate incentives for abled riders to use the fixed-route system and reduce their use of paratransit service, which is more expensive to provide per passenger than the fixed-route service.

Reduced Fares

It is important to note that Clallam Transit participates of the Regional Reduced Fare Permit (RRFP), which provides riders 65 years old and older, riders with disabilities, and Medicare card holders with reduced fares, and it provides a significant discount to Peninsula College students and reduced fares to young persons aged 6 to 19 years old.

Clallam Transit should consider implementation of a low-income fare program in conjunction with a change in its fare structure, to make sure service is affordable to everyone in the county. This could be a means-tested program like King County Metro's ORCA LIFT program, which offers a reduced transit fare for people with incomes at or below 200 percent of the federal poverty level. This is about $30,000 a year for an individual, and 30 percent of Clallam Transit's existing riders. Enrollment and verification can be made available through partner agencies like Health and Human Services, Social Security and Employment Security.

[5] Federal Transit Administration. https://www.transit.dot.gov/regulations-and-guidance/civil-rights-ada/frequently-asked-questions#35